

=> s 17 and 1/nr
2733726 1/NR
L8 1677 L7 AND 1/NR

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FILE COVERS 1947 - 11 Nov 2001 VOL 135 ISS 21
FILE LAST UPDATED: 9 Nov 2001 (20011109/ED)

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=> s 18/prep
7707 L8
2798213 PREP/RL
L9 796 L8/PREP
(L8 (L) PREP/RL)

=> s 19 and transition metal
723251 TRANSITION
211376 TRANSITIONS
816763 TRANSITION
(TRANSITION OR TRANSITIONS)
1242373 METAL
605907 METALS
1488751 METAL
(METAL OR METALS)
143990 TRANSITION METAL
(TRANSITION(W) METAL)
L10 18 L9 AND TRANSITION METAL

=> s l9 and metal

1242373 METAL

605907 METALS

1488751 METAL

(METAL OR METALS)

L11

115 L9 AND METAL

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alumin? or Gallium or ga)

6431060 LI?

649163 NA

1220 NAS

650149 NA

(NA OR NAS)

1109474 K

72874 CS

43 CSES

72914 CS

(CS OR CSES)

4438640 BE

725 BES

4439103 BE

(BE OR BES)

641933 CA

9025 CAS

649609 CA

(CA OR CAS)

641933 CA

9025 CAS

649609 CA

(CA OR CAS)

111847 BA

2524 BAS

113996 BA

(BA OR BAS)

1159170 B

162799 BORON

238 BORONS

162882 BORON

(BORON OR BORONS)

786621 AL

2822 ALS

789228 AL

(AL OR ALS)

858825 ALUMIN?

228239 GALLIUM

17 GALLIUMS

228239 GALLIUM

(GALLIUM OR GALLIUMS)

93335 GA

1115834 GAS

1202168 GA

(GA OR GAS)

L12

448 L9 AND (LI? OR NA OR K OR CS OR BE OR CA OR CA OR BA OR B OR
BORON OR AL OR ALUMIN? OR GALLIUM OR GA)

=> l12 and metal

L12 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=> s l12 and metal

1242373 METAL

605907 METALS
1488751 METAL
(METAL OR METALS)

L13 79 L12 AND METAL

=> s l13 and transition
723251 TRANSITION
211376 TRANSITIONS
816763 TRANSITION
(TRANSITION OR TRANSITIONS)

L14 16 L13 AND TRANSITION

=> d ti 1-16

L14 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI **Transition metal** catalyzed preparation of Grignard compounds

L14 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Catalyst composition comprising group VIII **metal** and bidentate phosphine **ligand** for preparation of polyketones

L14 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Reactivity of ether- and amine-complexed dimers and tetramers of alkylolithiums towards triphenylmethane

L14 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI High-yield low-cost preparation of metallocene compound by reaction of metallocene dihalide with Grignard reagent

L14 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Supported diols, **ligands** containing two phosphorus atoms, and **transition-metal** complexes for catalysts

L14 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Stabilizer for (fluoroaryl)borane compound and methods of stabilizing and crystallizing (fluoroaryl)borane compound

L14 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Delivery and scavenging agents for combinatorial synthesis of organometallic compds.

L14 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Method for preparation of vanadium metallocene

L14 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI **Transition metal** complexes, catalysts for olefin polymerization, and process for producing olefin polymers

L14 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Organoarsenic **ligands** as potential f-**transition metal** ion extractants. Part 1. The synthesis of some new organofluorine arsonic and arsinic acids

L14 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Process and catalysts for the preparation of bisaryl compounds by the coupling of arylmagnesium chlorides with aryl chlorides in the presence of phosphine **ligands**

L14 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Synthesis and characterization of chiral bimetallic complexes bearing hard and soft Lewis acidic sites

L14 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Process for the preparation of 5-(2,4-difluorophenyl)salicylic acid

L14 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Mechanistic studies of the thermolytic and photolytic rearrangement of [bis(diphenylphosphino)ethane]bis(neophyl)platinum(II)

L14 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Reactions of organometallic compounds catalyzed by **transition metal** complexes. XIII. Comparison of activities of organometallic compounds in aryldemetallation catalyzed by palladium complexes

L14 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Catalysts for polymerization of olefins

=> d his

(FILE 'HOME' ENTERED AT 14:36:01 ON 11 NOV 2001)

FILE 'REGISTRY' ENTERED AT 14:36:13 ON 11 NOV 2001

L1 11879 S MG/ELS AND X/ELS

L2 8127 S L1 AND 1/NC

L3 6337 S L2 AND C/ELS

L4 5469 S L3 AND 1/MG

L5 5171 S L4 AND 1/M

L6 5037 S L4 NOT SI/ELS

L7 4938 S L6 NOT (PHHALO? OR PORPH?)

L8 1677 S L7 AND 1/NR

FILE 'CAPLUS' ENTERED AT 14:39:32 ON 11 NOV 2001

L9 796 S L8/PREP

L10 18 S L9 AND TRANSITION METAL

L11 115 S L9 AND METAL

L12 448 S L9 AND (LI? OR NA OR K OR CS OR BE OR CA OR CA OR BA OR B OR

L13 79 S L12 AND METAL

L14 16 S L13 AND TRANSITION

=> s l9 and grignard

36351 GRIGNARD

610 GRIGNARDS

36512 GRIGNARD

(GRIGNARD OR GRIGNARDS)

L15 408 L9 AND GRIGNARD

=> s l15 and catalys?

731749 CATALYS?

L16 64 L15 AND CATALYS?

=> s l16 and transition

723251 TRANSITION

211376 TRANSITIONS

816763 TRANSITION

(TRANSITION OR TRANSITIONS)

L17 8 L16 AND TRANSITION

=> d ibib abs hitstr 1-8

L17 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2001:17097 CAPLUS

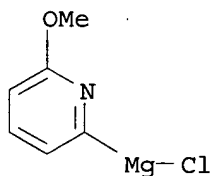
DOCUMENT NUMBER: 134:207854

TITLE: **Transition** metal catalyzed preparation of **Grignard** compounds

AUTHOR(S): Bogdanovic, Borislav; Schwickardi, Manfred

CORPORATE SOURCE: Max-Planck-Institut fur Kohlenforschung, Mulheim an

SOURCE: der Ruhr, 45470, Germany
 Angew. Chem., Int. Ed. (2000), 39(24), 4610-4612
 CODEN: ACIEF5; ISSN: 1433-7851
 PUBLISHER: Wiley-VCH Verlag GmbH
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A method is introduced for the prepn. of several **Grignard** compds. that are considered to be difficult to prep. and the possible catalytic role of the **transition** metals are discussed. Thus, FeCl₂-catalyzed and MgCl₂-cocatalyzed **Grignard** reaction of 1-chloronaphthalene with magnesium in THF gave 82.3% 1-naphthylmagnesium chloride.
 IT 328553-25-9P
 RL: SPN (Synthetic preparation); **PREP** (Preparation) (transition metal catalyzed prepn. of **Grignard** compds.)
 RN 328553-25-9 CAPLUS
 CN Magnesium, chloro(6-methoxy-2-pyridinyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16
 REFERENCE(S): (1) Aleandri, L; Adv Mater 1996, V8, P600 CAPLUS
 (2) Aleandri, L; Chem Eur J 1997, V3, P1710 CAPLUS
 (3) Aleandri, L; Chem Eur J 1997, V3, P1710 CAPLUS
 (4) Aleandri, L; Chem Mater 1995, V7, P1153 CAPLUS
 (5) Bogdanovic, B; WO 9802443 CAPLUS
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:819386 CAPLUS
 DOCUMENT NUMBER: 132:58385
 TITLE: High-yield low-cost preparation of metallocene compound by reaction of metallocene dihalide with **Grignard** reagent
 INVENTOR(S): Kitagawa, Yuichi; Otaka, Koji; Kubo, Tomoya; Takeichi, Eiji
 PATENT ASSIGNEE(S): Asahi Kasei Kogyo K. K., Japan
 SOURCE: PCT Int. Appl., 19 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9967260	A1	19991229	WO 1998-JP2819	19980624
W: ES, US				
US 6175025	B1	20010116	US 2000-486273	20000223
PRIORITY APPLN. INFO.:			JP 1996-345421	A 19961225
			JP 1997-354685	A 19971224
			WO 1998-JP2819	W 19980624

AB Disubstituted metallocene compds. with high quality can be prepd. by the reaction of a metallocene dihalide with a **Grignard** reagent of formula RMgX (R: (substituted) aryl, benzyl, or diarylphosphinomethylene;

X: halogen) under specified conditions. Thus, di-p-tolylbis(.eta.-cyclopentadienyl)titanium was prepd. by reaction of p-tolylmagnesium chloride-THF soln. 45 L (1.810 mol/L) with titanocene dichloride-xylene soln. (8817 g/110 L) at (-8.degree.)-(-10.degree.) for 10 h, showing yield 67.0%, Ti content 13.26%, and Mg and Cl residue 1 ppm and 10 ppm, resp.

IT 100-59-4P, Phenylmagnesium chloride 696-61-7P, p-Tolylmagnesium chloride 699-19-4P, p-Methoxyphenylmagnesium chloride 6921-34-2P, Benzylmagnesium chloride

RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation)

(prepn. of metallocene compd. by rection of metallocene dihalide with Grignard reagent)

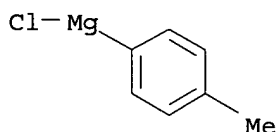
RN 100-59-4 CAPLUS

CN Magnesium, chlorophenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

Ph-Mg-Cl

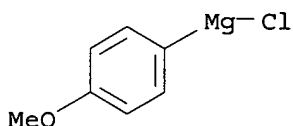
RN 696-61-7 CAPLUS

CN Magnesium, chloro(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 699-19-4 CAPLUS

CN Magnesium, chloro(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 6921-34-2 CAPLUS

CN Magnesium, chloro(phenylmethyl)- (9CI) (CA INDEX NAME)

Ph-CH₂-Mg-Cl

REFERENCE COUNT:

2

REFERENCE(S):

- (1) Hoechst Ag; EP 749985 A2 CAPLUS
- (2) Hoechst Ag; JP 93085 A 1997

L17 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:412982 CAPLUS

DOCUMENT NUMBER: 131:32047

TITLE: Method for synthesis of organomagnesium compounds using catalysts

INVENTOR(S): Bogdanovic, Borislav; Schwickardi, Manfred

PATENT ASSIGNEE(S): Studiengesellschaft Kohle m.b.H., Germany

SOURCE: Ger. Offen., 6 pp.

CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19757499	A1	19990624	DE 1997-19757499	19971223
WO 9933844	A1	19990708	WO 1998-EP8056	19981210
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1042332	A1	20001011	EP 1998-966289	19981210
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE				
US 6221285	B1	20010424	US 2000-581874	20000619
PRIORITY APPLN. INFO.:				
			DE 1997-19757499 A	19971223
			WO 1998-EP8056 W	19981210

OTHER SOURCE(S): CASREACT 131:32047

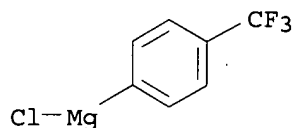
AB The prepn. of organomagnesium compds. from reaction of arom. org. chloride with magnesium in the presence of **transition metal catalysts** is reported. Thus, activation of magnesium powder with EtBr in THF followed by Fe(OEt)₂ catalyzed reaction with 1,3-dibenzyl-2-(4-chlorophenyl)-imidazolidine gave organomagnesium compd. which on silylation with Me₃SiCl gave 94.3% 1,3-dibenzyl-2-(4-trimethylsilylphenyl)-imidazolidine.

IT **2923-41-3P 52770-24-8P**

RL: SPN (Synthetic preparation); **PREP (Preparation)**
 (method for synthesis of organomagnesium compds. using **transition metal complex catalysts**)

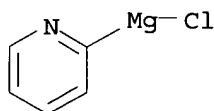
RN 2923-41-3 CAPLUS

CN Magnesium, chloro[4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



RN 52770-24-8 CAPLUS

CN Magnesium, chloro-2-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

REFERENCE(S):

14

- (1) Anon; EP 0001861 A1 CAPLUS
- (2) Anon; EP 0014983 A2 CAPLUS
- (3) Anon; DE 19605778 C1 CAPLUS
- (4) Anon; DE 19628159 A1 CAPLUS
- (5) Anon; DE 2749983 A1 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:59159 CAPLUS

DOCUMENT NUMBER: 128:128143

TITLE: Method for synthesizing **Grignard** compounds using **catalysts**
 INVENTOR(S): Bogdanovic, Borislav; Schwickardi, Manfred
 PATENT ASSIGNEE(S): Studiengesellschaft Kohle m.b.H., Germany
 SOURCE: Ger. Offen., 6 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19628159	A1	19980115	DE 1996-19628159	19960712
CA 2260023	AA	19980122	CA 1997-2260023	19970703
WO 9802443	A1	19980122	WO 1997-EP3516	19970703
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 915889	A1	19990519	EP 1997-931761	19970703
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE				
JP 2000514444	T2	20001031	JP 1998-505568	19970703
US 6117372	A	20000912	US 1999-214369	19990105
PRIORITY APPLN. INFO.:			DE 1996-19628159 A	19960712
			WO 1997-EP3516 W	19970703

OTHER SOURCE(S): CASREACT 128:128143

AB The prepn. of **Grignard** reagent of arom. chloro compds. by the reaction of magnesium metal in the presence of **transition metal/magnesium chloride complex as catalyst** is described. Thus, activation of magnesium with Et bromide in THF followed by treatment with FeCl₂/MgCl₂ in THF gave [FeMgCl.cntdot.0.5 MgCl₂] **catalyst**. Reaction of 1-chloronaphthalene with magnesium in THF gave 62% 1-naphthylmagnesium chloride.

IT **100-59-4P**, Phenylmagnesium chloride **69049-76-9P**, 6-(Tetrahydropyran-2-yloxy)hexylmagnesium chloride **104888-35-9P**
 RL: SPN (Synthetic preparation); **PREP (Preparation)** (method for synthesizing **Grignard** compds. using **catalysts**)

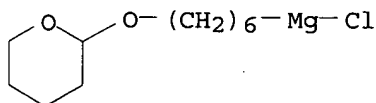
RN 100-59-4 CAPLUS

CN Magnesium, chlorophenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

Ph-Mg-Cl

RN 69049-76-9 CAPLUS

CN Magnesium, chloro[6-[(tetrahydro-2H-pyran-2-yl)oxy]hexyl]- (9CI) (CA INDEX NAME)



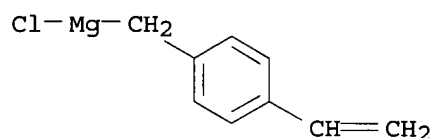
RN 104888-35-9 CAPLUS

CN Magnesium, chloro[(4-ethenylphenyl)methyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 87532-75-0

CMF C9 H9 Cl Mg



L17 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1995:478335 CAPLUS

DOCUMENT NUMBER: 122:239312

TITLE: Process and **catalysts** for the preparation of bisaryl compounds by the coupling of arylmagnesium chlorides with aryl chlorides in the presence of phosphine ligands

INVENTOR(S): Poetsch, Eike; Meyer, Volker

PATENT ASSIGNEE(S): Merck Patent GmbH, Germany

SOURCE: Ger. Offen., 9 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

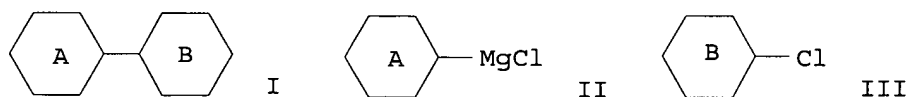
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4326169	A1	19950209	DE 1993-4326169	19930804

OTHER SOURCE(S): CASREACT 122:239312; MARPAT 122:239312

GI



AB The title compds. [I; rings A and B = (un)substituted Ph, naphthyl] (e.g., 2-methylbiphenyl), useful as liq. crystals, are prepd. in high yield and selectivity by the coupling of aryl **Grignard** reagents (II) (e.g., o-tolylmagnesium chloride) with aryl chlorides (III) (e.g., PhCl) in the presence of a **transition metal catalysts** (e.g., NiCl₂) and phosphine R₁2PR₂ [R₁ = (un)branched alkyl, alkoxy, cycloalkyl; R₂ = R₁, R₃PR₁2; R₃ = C1-10 alkylene] ligands (e.g., tricyclohexylphosphine).

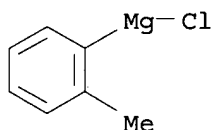
IT 33872-80-9P

RL: RCT (Reactant); SPN (Synthetic preparation); **PREP** (Preparation)

(process and **catalysts** for the prepn. of bisaryl compds. by the coupling of arylmagnesium chlorides with aryl chlorides in the presence of phosphine ligands)

RN 33872-80-9 CAPLUS

CN Magnesium, chloro(2-methylphenyl)- (9CI) (CA INDEX NAME)



L17 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:572245 CAPLUS

DOCUMENT NUMBER: 117:172245

TITLE: Hyperbranched polyphenylenes

AUTHOR(S): Kim, Young H.; Webster, Owen W.

CORPORATE SOURCE: Du Pont Cent. Res. and Dev., Wilmington, DE,
19880-0328, USA

SOURCE: Macromolecules (1992), 25(21), 5561-72

CODEN: MAMOBX; ISSN: 0024-9297

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Highly branched polyphenylenes were synthesized from AB2 type monomers, e.g., (3,5-dibromophenyl)boronic acid and 3,5-dihalophenyl Grignard reagents. These monomers were polymd. by Pd(0) and Ni(II)-catalyzed aryl-aryl coupling reactions, resp. Polymers with mol. wts. 5,000-35,000 and polydispersities <1.5 were obtained. They were thermally stable to 550.degree. and sol. in many org. solvents. ¹³C NMR indicated .apprx.70% branching efficiency. A Tg at 236.degree. was obsd., but the polymer was brittle and did not form films. The melt flow viscosity of polystyrene was reduced, and the modulus was improved as a bromo functional hyperbranched polymer was added. The bromo polymer was metalated with butyllithium. The resulting lithio polymer reacted with various electrophiles to provide polymers with other end groups which control soly. as well as thermal properties. Some of these derivs. were used as multifunctional initiators to prep. star polymers, for example, via ring-opening polymn. of propiolactone and anionic polymn. of Me methacrylate.

IT 125128-37-2P 143172-68-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(hyperbranched, prepn. and properties of)

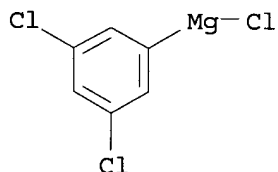
RN 125128-37-2 CAPLUS

CN Magnesium, chloro(3,5-dichlorophenyl)-, homopolymer (9CI) (CA INDEX NAME)

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CRN 124963-68-4

CMF C6 H3 Cl3 Mg



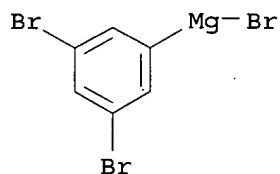
RN 143172-68-3 CAPLUS

CN Magnesium, bromo(3,5-dibromophenyl)-, homopolymer (9CI) (CA INDEX NAME)

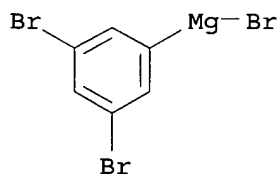
CM 1

CRN 38440-05-0

CMF C6 H3 Br3 Mg



IT 143172-68-3DP, reaction products with butyllithium and electrophiles
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and characterization of)
 RN 143172-68-3 CAPLUS
 CN Magnesium, bromo(3,5-dibromophenyl)-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 38440-05-0
 CMF C6 H3 Br3 Mg

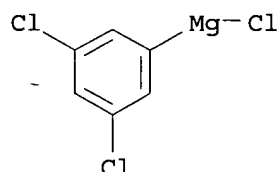


L17 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1990:78260 CAPLUS
 DOCUMENT NUMBER: 112:78260
 TITLE: Hyperbranched polyarylene
 INVENTOR(S): Kim, Young H.
 PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
 SOURCE: U.S., 8 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

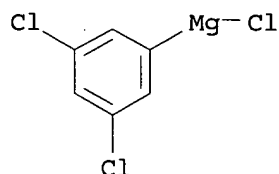
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4857630	A	19890815	US 1987-129151	19871207
US 5070183	A	19911203	US 1989-341072	19890420
US 5145930	A	19920908	US 1991-745300	19910815
PRIORITY APPLN. INFO.:			US 1987-129151	19871207
			US 1989-341072	19890420

AB Sol. hyperbranched polyarylenes are prepd. which have .gtoreq.1 branch per 10 repeating monomer units, (n-1)x + 1 functional groups selected from Br, I, or Cl (n = no. of halogen atoms per mol.; x = no. of repeating monomer units), and spherical diam. <1000 .ANG.. Thus, 9.44 g 1,3,5-Br₃C₆H₃ was reacted with 19.4 mL 1.55M BuLi in hexane at -78.degree. under N, 30 mL of B(OMe)₃ in 300 mL Et₂O added, the reaction mixt. warmed to room temp. overnight, and further reacted with 6N HCl, producing 8.49 g 3,5-dibromobenzeneboronic acid; 2.98 g of which (dissolved in 5 mL Et₂O) was polymd. in a mixt. of 50 mL xylene, 20 mL 1M aq. Na₂CO₃, and 30.8 mg Pd(PPh₃)₄ over 11 h at 88.degree. (reflux), producing a polymer having

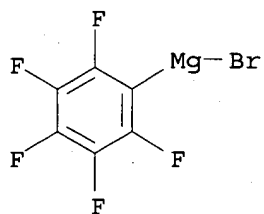
no.-av. mol. wt. 5000 and glass transition temp. 237.6.degree..
 IT 125128-37-2P
 RL: PREP (Preparation)
 (hyperbranched, manuf. of)
 RN 125128-37-2 CAPLUS
 CN Magnesium, chloro(3,5-dichlorophenyl)-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 124963-68-4
 CMF C6 H3 Cl3 Mg



IT 124963-68-4P
 RL: RCT (Reactant); PREP (Preparation)
 (prepn. and polymn. of)
 RN 124963-68-4 CAPLUS
 CN Magnesium, chloro(3,5-dichlorophenyl)- (9CI) (CA INDEX NAME)



L17 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1969:470669 CAPLUS
 DOCUMENT NUMBER: 71:70669
 TITLE: New synthesis of perfluoroaromatic Grignard reagents
 AUTHOR(S): Respass, William L.; Tamborski, Christ
 CORPORATE SOURCE: Air Force Mater. Lab., Wright-Patterson Air Force Base, Ohio, USA
 SOURCE: J. Organometal. Chem. (1969), 18(2), 263-74
 CODEN: JORCAI
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Perfluoroaryl-magnesium compds. (I) were synthesized directly from completely fluorinated aryl compounds (e.g., hexafluorobenzene, decafluorobiphenyl, octafluorotoluene and octafluoronaphthalene) through their reaction with EtMgBr and certain transition metal halides (CoCl₂, FeCl₂, NiCl₂, CuI, TiCl₄, PdCl₂, RhCl₃ and AgCl). The yields of the I vary with the type of perfluoroaryl substrate and metal halide. I thus formed undergo typical Grignard reactions.
 IT 879-05-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 879-05-0 CAPLUS
 CN Magnesium, bromo(pentafluorophenyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



=> s 17 and 1/nr
2733726 1/NR
L8 1677 L7 AND 1/NR

=> file caplus	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	39.86	40.01

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FILE LAST UPDATED: 9 Nov 2001 (20011109/ED)

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=> s 18/prep
7707 L8
2798213 PREP/RL
L9 796 L8/PREP
(L8 (L) PREP/RL)

=> s 19 and transition metal
723251 TRANSITION
211376 TRANSITIONS
816763 TRANSITION
(TRANSITION OR TRANSITIONS)
1242373 METAL
605907 METALS
1488751 METAL
(METAL OR METALS)
143990 TRANSITION METAL
(TRANSITION (W) METAL)
L10 18 L9 AND TRANSITION METAL

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    605907 METALS
    1488751 METAL
          (METAL OR METALS)
L11      115 L9 AND METAL

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    1220 NAS
    650149 NA
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    1109474 K
    72874 CS
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    72914 CS
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    238 BORONS
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    786621 AL
    2822 ALS
    789228 AL
          (AL OR ALS)
    858825 ALUMIN?
    228239 GALLIUM
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    93335 GA
    1115834 GAS
    1202168 GA
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The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

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    1242373 METAL

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605907 METALS
1488751 METAL
(METAL OR METALS)

L13 79 L12 AND METAL

=> s l13 and transition
723251 TRANSITION
211376 TRANSITIONS
816763 TRANSITION
(TRANSITION OR TRANSITIONS)

L14 16 L13 AND TRANSITION

=> d ti 1-16

L14 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI **Transition metal** catalyzed preparation of Grignard compounds

L14 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Catalyst composition comprising group VIII **metal** and bidentate phosphine **ligand** for preparation of polyketones

L14 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Reactivity of ether- and amine-complexed dimers and tetramers of alkylolithiums towards triphenylmethane

L14 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI High-yield low-cost preparation of metallocene compound by reaction of metallocene dihalide with Grignard reagent

L14 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Supported diols, **ligands** containing two phosphorus atoms, and **transition-metal** complexes for catalysts

L14 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Stabilizer for (fluoroaryl)borane compound and methods of stabilizing and crystallizing (fluoroaryl)borane compound

L14 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Delivery and scavenging agents for combinatorial synthesis of organometallic compds.

L14 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Method for preparation of vanadium metallocene

L14 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI **Transition metal** complexes, catalysts for olefin polymerization, and process for producing olefin polymers

L14 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Organoarsenic **ligands** as potential f-**transition metal** ion extractants. Part 1. The synthesis of some new organofluorine arsonic and arsinic acids

L14 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Process and catalysts for the preparation of bisaryl compounds by the coupling of arylmagnesium chlorides with aryl chlorides in the presence of phosphine **ligands**

L14 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Synthesis and characterization of chiral bimetallic complexes bearing hard and soft Lewis acidic sites

L14 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Process for the preparation of 5-(2,4-difluorophenyl)salicylic acid

L14 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Mechanistic studies of the thermolytic and photolytic rearrangement of [bis(diphenylphosphino)ethane]bis(neophyl)platinum(II)

L14 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Reactions of organometallic compounds catalyzed by **transition metal** complexes. XIII. Comparison of activities of organometallic compounds in aryldemetallation catalyzed by palladium complexes

L14 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2001 ACS

TI Catalysts for polymerization of olefins

=> d his

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FILE 'REGISTRY' ENTERED AT 14:36:13 ON 11 NOV 2001

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L2 8127 S L1 AND 1/NC

L3 6337 S L2 AND C/ELS

L4 5469 S L3 AND 1/MG

L5 5171 S L4 AND 1/M

L6 5037 S L4 NOT SI/ELS

L7 4938 S L6 NOT (PHHALO? OR PORPH?)

L8 1677 S L7 AND 1/NR

FILE 'CAPLUS' ENTERED AT 14:39:32 ON 11 NOV 2001

L9 796 S L8/PREP

L10 18 S L9 AND TRANSITION METAL

L11 115 S L9 AND METAL

L12 448 S L9 AND (LI? OR NA OR K OR CS OR BE OR CA OR CA OR BA OR B OR

L13 79 S L12 AND METAL

L14 16 S L13 AND TRANSITION

=> s l9 and grignard

36351 GRIGNARD

610 GRIGNARDS

36512 GRIGNARD

(GRIGNARD OR GRIGNARDS)

L15 408 L9 AND GRIGNARD

=> s l15 and catalys?

731749 CATALYS?

L16 64 L15 AND CATALYS?

=> s l16 and transition

723251 TRANSITION

211376 TRANSITIONS

816763 TRANSITION

(TRANSITION OR TRANSITIONS)

L17 8 L16 AND TRANSITION

=> d ibib abs hitstr 1-8

L17 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2001:17097 CAPLUS

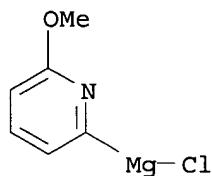
DOCUMENT NUMBER: 134:207854

TITLE: **Transition metal catalyzed preparation of Grignard compounds**

AUTHOR(S): Bogdanovic, Borislav; Schwickardi, Manfred

CORPORATE SOURCE: Max-Planck-Institut fur Kohlenforschung, Mulheim an

SOURCE: der Ruhr, 45470, Germany
 Angew. Chem., Int. Ed. (2000), 39(24), 4610-4612
 CODEN: ACIEF5; ISSN: 1433-7851
 PUBLISHER: Wiley-VCH Verlag GmbH
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A method is introduced for the prepn. of several **Grignard** compds. that are considered to be difficult to prep. and the possible catalytic role of the **transition** metals are discussed. Thus, FeCl₂-catalyzed and MgCl₂-cocatalyzed **Grignard** reaction of 1-chloronaphthalene with magnesium in THF gave 82.3% 1-naphthylmagnesium chloride.
 IT 328553-25-9P
 RL: SPN (Synthetic preparation); **PREP** (**Preparation**)
 (transition metal catalyzed prepn. of **Grignard** compds.)
 RN 328553-25-9 CAPLUS
 CN Magnesium, chloro(6-methoxy-2-pyridinyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16
 REFERENCE(S): (1) Aleandri, L; Adv Mater 1996, V8, P600 CAPLUS
 (2) Aleandri, L; Chem Eur J 1997, V3, P1710 CAPLUS
 (3) Aleandri, L; Chem Eur J 1997, V3, P1710 CAPLUS
 (4) Aleandri, L; Chem Mater 1995, V7, P1153 CAPLUS
 (5) Bogdanovic, B; WO 9802443 CAPLUS
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:819386 CAPLUS
 DOCUMENT NUMBER: 132:58385
 TITLE: High-yield low-cost preparation of metallocene compound by reaction of metallocene dihalide with **Grignard** reagent
 INVENTOR(S): Kitagawa, Yuichi; Otaka, Koji; Kubo, Tomoya; Takeichi, Eiji
 PATENT ASSIGNEE(S): Asahi Kasei Kogyo K. K., Japan
 SOURCE: PCT Int. Appl., 19 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9967260	A1	19991229	WO 1998-JP2819	19980624
W: ES, US				
US 6175025	B1	20010116	US 2000-486273	20000223
PRIORITY APPLN. INFO.:			JP 1996-345421	A 19961225
			JP 1997-354685	A 19971224
			WO 1998-JP2819	W 19980624

AB Disubstituted metallocene compds. with high quality can be prepd. by the reaction of a metallocene dihalide with a **Grignard** reagent of formula RMgX (R: (substituted) aryl, benzyl, or diarylphosphinomethylene;

X: halogen) under specified conditions. Thus, di-p-tolylbis(.eta.-cyclopentadienyl)titanium was prepd. by reaction of p-tolylmagnesium chloride-THF soln. 45 L (1.810 mol/L) with titanocene dichloride-xylene soln. (8817 g/110 L) at (-8.degree.)-(-10.degree.) for 10 h, showing yield 67.0%, Ti content 13.26%, and Mg and Cl residue 1 ppm and 10 ppm, resp.

IT 100-59-4P, Phenylmagnesium chloride 696-61-7P, p-Tolylmagnesium chloride 699-19-4P, p-Methoxyphenylmagnesium chloride 6921-34-2P, Benzylmagnesium chloride

RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation)

(prepn. of metallocene compd. by reaction of metallocene dihalide with Grignard reagent)

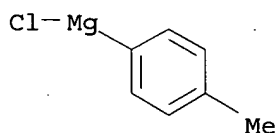
RN 100-59-4 CAPLUS

CN Magnesium, chlorophenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

Ph-Mg-Cl

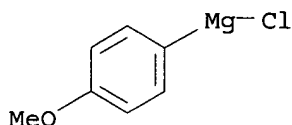
RN 696-61-7 CAPLUS

CN Magnesium, chloro(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 699-19-4 CAPLUS

CN Magnesium, chloro(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 6921-34-2 CAPLUS

CN Magnesium, chloro(phenylmethyl)- (9CI) (CA INDEX NAME)

Ph-CH₂-Mg-Cl

REFERENCE COUNT:

2

REFERENCE(S):

- (1) Hoechst Ag; EP 749985 A2 CAPLUS
- (2) Hoechst Ag; JP 93085 A 1997

L17 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:412982 CAPLUS

DOCUMENT NUMBER: 131:32047

TITLE: Method for synthesis of organomagnesium compounds using catalysts

INVENTOR(S): Bogdanovic, Borislav; Schwickardi, Manfred

PATENT ASSIGNEE(S): Studiengesellschaft Kohle m.b.H., Germany

SOURCE: Ger. Offen., 6 pp.

DOCUMENT TYPE:

CODEN: GWXXBX

LANGUAGE:

Patent

FAMILY ACC. NUM. COUNT: 1

German

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19757499	A1	19990624	DE 1997-19757499	19971223
WO 9933844	A1	19990708	WO 1998-EP8056	19981210
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1042332	A1	20001011	EP 1998-966289	19981210
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE				
US 6221285	B1	20010424	US 2000-581874	20000619
PRIORITY APPLN. INFO.:				
			DE 1997-19757499 A	19971223
			WO 1998-EP8056 W	19981210

OTHER SOURCE(S): CASREACT 131:32047

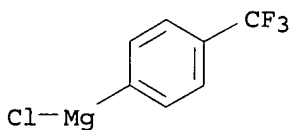
AB The prepn. of organomagnesium compds. from reaction of arom. org. chloride with magnesium in the presence of **transition metal catalysts** is reported. Thus, activation of magnesium powder with EtBr in THF followed by Fe(OEt)₂ catalyzed reaction with 1,3-dibenzyl-2-(4-chlorophenyl)-imidazolidine gave organomagnesium compd. which on silylation with Me₃SiCl gave 94.3% 1,3-dibenzyl-2-(4-trimethylsilylphenyl)-imidazolidine.

IT 2923-41-3P 52770-24-8P

RL: SPN (Synthetic preparation); **PREP (Preparation)**
(method for synthesis of organomagnesium compds. using **transition metal complex catalysts**)

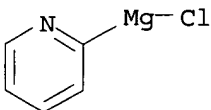
RN 2923-41-3 CAPLUS

CN Magnesium, chloro[4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



RN 52770-24-8 CAPLUS

CN Magnesium, chloro-2-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

14

REFERENCE(S):

- (1) Anon; EP 0001861 A1 CAPLUS
- (2) Anon; EP 0014983 A2 CAPLUS
- (3) Anon; DE 19605778 C1 CAPLUS
- (4) Anon; DE 19628159 A1 CAPLUS
- (5) Anon; DE 2749983 A1 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:59159 CAPLUS

DOCUMENT NUMBER: 128:128143

TITLE: Method for synthesizing **Grignard** compounds using **catalysts**
 INVENTOR(S): Bogdanovic, Borislav; Schwickardi, Manfred
 PATENT ASSIGNEE(S): Studiengesellschaft Kohle m.b.H., Germany
 SOURCE: Ger. Offen., 6 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19628159	A1	19980115	DE 1996-19628159	19960712
CA 2260023	AA	19980122	CA 1997-2260023	19970703
WO 9802443	A1	19980122	WO 1997-EP3516	19970703
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 915889	A1	19990519	EP 1997-931761	19970703
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE				
JP 2000514444	T2	20001031	JP 1998-505568	19970703
US 6117372	A	20000912	US 1999-214369	19990105
PRIORITY APPLN. INFO.:			DE 1996-19628159 A	19960712
			WO 1997-EP3516 W	19970703

OTHER SOURCE(S): CASREACT 128:128143

AB The prepn. of **Grignard** reagent of arom. chloro compds. by the reaction of magnesium metal in the presence of **transition metal/magnesium chloride complex as catalyst** is described. Thus, activation of magnesium with Et bromide in THF followed by treatment with FeCl₂/MgCl₂ in THF gave [FeMgCl.cntdot.0.5 MgCl₂] **catalyst**. Reaction of 1-chloronaphthalene with magnesium in THF gave 62% 1-naphthylmagnesium chloride.

IT **100-59-4P**, Phenylmagnesium chloride **69049-76-9P**, 6-(Tetrahydropyran-2-yloxy)hexylmagnesium chloride **104888-35-9P**
 RL: SPN (Synthetic preparation); **PREP (Preparation)** (method for synthesizing **Grignard** compds. using **catalysts**)

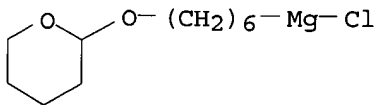
RN 100-59-4 CAPLUS

CN Magnesium, chlorophenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

Ph-Mg-Cl

RN 69049-76-9 CAPLUS

CN Magnesium, chloro[6-[(tetrahydro-2H-pyran-2-yl)oxy]hexyl]- (9CI) (CA INDEX NAME)



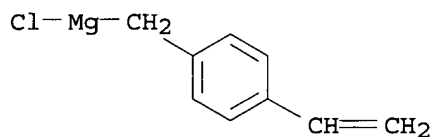
RN 104888-35-9 CAPLUS

CN Magnesium, chloro[(4-ethenylphenyl)methyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 87532-75-0

CMF C9 H9 Cl Mg



L17 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1995:478335 CAPLUS

DOCUMENT NUMBER: 122:239312

TITLE: Process and **catalysts** for the preparation of bisaryl compounds by the coupling of arylmagnesium chlorides with aryl chlorides in the presence of phosphine ligands

INVENTOR(S): Poetsch, Eike; Meyer, Volker

PATENT ASSIGNEE(S): Merck Patent GmbH, Germany

SOURCE: Ger. Offen., 9 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

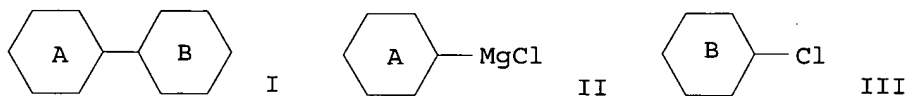
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4326169	A1	19950209	DE 1993-4326169	19930804

OTHER SOURCE(S): CASREACT 122:239312; MARPAT 122:239312

GI



AB The title compds. [I; rings A and B = (un)substituted Ph, naphthyl] (e.g., 2-methylbiphenyl), useful as liq. crystals, are prepd. in high yield and selectivity by the coupling of aryl **Grignard** reagents (II) (e.g., o-tolylmagnesium chloride) with aryl chlorides (III) (e.g., PhCl) in the presence of a **transition** metal **catalysts** (e.g., NiCl₂) and phosphine R₁2PR₂ [R₁ = (un)branched alkyl, alkoxy, cycloalkyl; R₂ = R₁, R₃PR₁2; R₃ = C1-10 alkylene] ligands (e.g., tricyclohexylphosphine).

IT 33872-80-9P

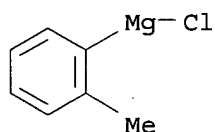
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP**

(Preparation)

(process and **catalysts** for the prepn. of bisaryl compds. by the coupling of arylmagnesium chlorides with aryl chlorides in the presence of phosphine ligands)

RN 33872-80-9 CAPLUS

CN Magnesium, chloro(2-methylphenyl)- (9CI) (CA INDEX NAME)



L17 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:572245 CAPLUS

DOCUMENT NUMBER: 117:172245

TITLE: Hyperbranched polyphenylenes

AUTHOR(S): Kim, Young H.; Webster, Owen W.

CORPORATE SOURCE: Du Pont Cent. Res. and Dev., Wilmington, DE,
19880-0328, USA

SOURCE: Macromolecules (1992), 25(21), 5561-72

CODEN: MAMOBX; ISSN: 0024-9297

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Highly branched polyphenylenes were synthesized from AB2 type monomers, e.g., (3,5-dibromophenyl)boronic acid and 3,5-dihalophenyl **Grignard** reagents. These monomers were polymd. by Pd(0) and Ni(II)-catalyzed aryl-aryl coupling reactions, resp. Polymers with mol. wts. 5,000-35,000 and polydispersities <1.5 were obtained. They were thermally stable to 550.degree. and sol. in many org. solvents. ¹³C NMR indicated .apprx.70% branching efficiency. A Tg at 236.degree. was obsd., but the polymer was brittle and did not form films. The melt flow viscosity of polystyrene was reduced, and the modulus was improved as a bromo functional hyperbranched polymer was added. The bromo polymer was metalated with butyllithium. The resulting lithio polymer reacted with various electrophiles to provide polymers with other end groups which control soly. as well as thermal properties. Some of these derivs. were used as multifunctional initiators to prep. star polymers, for example, via ring-opening polymn. of propiolactone and anionic polymn. of Me methacrylate.

IT 125128-37-2P 143172-68-3P

RL: SPN (Synthetic preparation); **PREP (Preparation)**
(hyperbranched, prepn. and properties of)

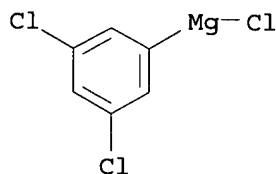
RN 125128-37-2 CAPLUS

CN Magnesium, chloro(3,5-dichlorophenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 124963-68-4

CMF C6 H3 Cl3 Mg



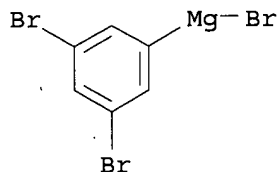
RN 143172-68-3 CAPLUS

CN Magnesium, bromo(3,5-dibromophenyl)-, homopolymer (9CI) (CA INDEX NAME)

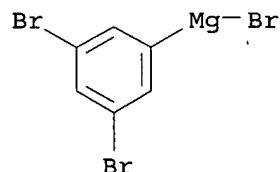
CM 1

CRN 38440-05-0

CMF C6 H3 Br3 Mg



IT 143172-68-3DP, reaction products with butyllithium and electrophiles
 RL: SPN (Synthetic preparation); **PREP (Preparation)**
 (prepn. and characterization of)
 RN 143172-68-3 CAPLUS
 CN Magnesium, bromo(3,5-dibromophenyl)-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 38440-05-0
 CMF C6 H3 Br3 Mg

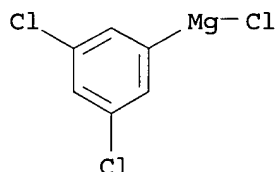


L17 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1990:78260 CAPLUS
 DOCUMENT NUMBER: 112:78260
 TITLE: Hyperbranched polyarylene
 INVENTOR(S): Kim, Young H.
 PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
 SOURCE: U.S., 8 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

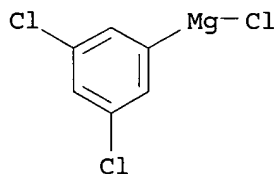
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4857630	A	19890815	US 1987-129151	19871207
US 5070183	A	19911203	US 1989-341072	19890420
US 5145930	A	19920908	US 1991-745300	19910815
PRIORITY APPLN. INFO.:			US 1987-129151	19871207
			US 1989-341072	19890420

AB Sol. hyperbranched polyarylenes are prepd. which have .gtoreq.1 branch per 10 repeating monomer units, (n-1)x + 1 functional groups selected from Br, I, or Cl (n = no. of halogen atoms per mol.; x = no. of repeating monomer units), and spherical diam. <1000 .ANG.. Thus, 9.44 g 1,3,5-Br₃C₆H₃ was reacted with 19.4 mL 1.55M BuLi in hexane at -78.degree. under N, 30 mL of B(OMe)₃ in 300 mL Et₂O added, the reaction mixt. warmed to room temp. overnight, and further reacted with 6N HCl, producing 8.49 g 3,5-dibromobenzeneboronic acid, 2.98 g of which (dissolved in 5 mL Et₂O) was polymd. in a mixt. of 50 mL xylene, 20 mL 1M aq. Na₂CO₃, and 30.8 mg Pd(PPh₃)₄ over 11 h at 88.degree. (reflux), producing a polymer having

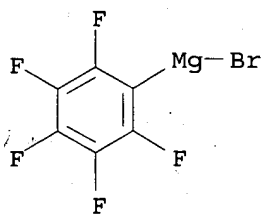
no.-av. mol. wt. 5000 and glass transition temp. 237.6.degree..
 IT 125128-37-2P
 RL: PREP (Preparation)
 (hyperbranched, manuf. of)
 RN 125128-37-2 CAPLUS
 CN Magnesium, chloro(3,5-dichlorophenyl)-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 124963-68-4
 CMF C6 H3 Cl3 Mg



IT 124963-68-4P
 RL: RCT (Reactant); PREP (Preparation)
 (prepn. and polymn. of)
 RN 124963-68-4 CAPLUS
 CN Magnesium, chloro(3,5-dichlorophenyl)- (9CI) (CA INDEX NAME)



L17 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1969:470669 CAPLUS
 DOCUMENT NUMBER: 71:70669
 TITLE: New synthesis of perfluoroaromatic Grignard reagents
 AUTHOR(S): Respass, William L.; Tamborski, Christ
 CORPORATE SOURCE: Air Force Mater. Lab., Wright-Patterson Air Force Base, Ohio, USA
 SOURCE: J. Organometal. Chem. (1969), 18(2), 263-74
 CODEN: JORCAI
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Perfluoroaryl-magnesium compds. (I) were synthesized directly from completely fluorinated aryl compounds (e.g., hexafluorobenzene, decafluorobiphenyl, octafluorotoluene and octafluoronaphthalene) through their reaction with EtMgBr and certain transition metal halides (CoCl₂, FeCl₂, NiCl₂, CuI, TiCl₄, PdCl₂, RhCl₃ and AgCl). The yields of the I vary with the type of perfluoroaryl substrate and metal halide. I thus formed undergo typical Grignard reactions.
 IT 879-05-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 879-05-0 CAPLUS
 CN Magnesium, bromo(pentafluorophenyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



=> D ACC 128:128143 ALL

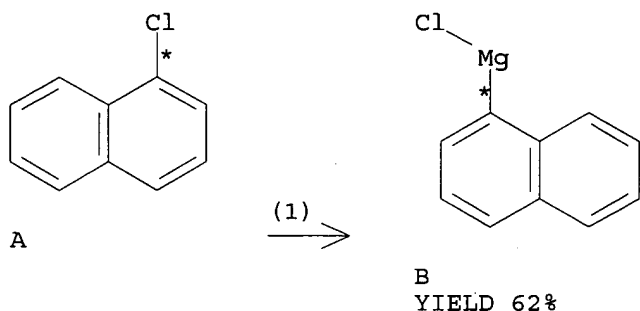
ANSWER 1 CASREACT COPYRIGHT 2001 ACS

AN 128:128143 CASREACT
TI Method for synthesizing Grignard compounds using catalysts
IN Bogdanovic, Borislav; Schwickardi, Manfred
PA Studiengesellschaft Kohle m.b.H., Germany
SO Ger. Offen., 6 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C07F003-02
ICA C07F019-00; C07F011-00; C07C025-18; C07B049-00; C07C013-58
ICI B01J027-138, B01J103-60; B01J027-138, B01J103-54; B01J027-138, B01J103-48;
B01J027-138, B01J103-50; B01J031-30, B01J103-19
CC 29-3 (Organometallic and Organometalloidal Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19628159	A1	19980115	DE 1996-19628159	19960712
	CA 2260023	AA	19980122	CA 1997-2260023	19970703
	WO 9802443	A1	19980122	WO 1997-EP3516	19970703
	W: CA, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 915889	A1	19990519	EP 1997-931761	19970703
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE				
	JP 2000514444	T2	20001031	JP 1998-505568	19970703
	US 6117372	A	20000912	US 1999-214369	19990105
PRAI	DE 1996-19628159		19960712		
	WO 1997-EP3516		19970703		
AB	The prepn. of Grignard reagent of arom. chloro compds. by the reaction of magnesium metal in the presence of transition metal/magnesium chloride complex as catalyst is described. Thus, activation of magnesium with Et bromide in THF followed by treatment with FeCl ₂ /MgCl ₂ in THF gave [FeMgCl.cntdot.0.5 MgCl ₂] catalyst. Reaction of 1-chloronaphthalene with magnesium in THF gave 62% 1-naphthylmagnesium chloride.				
ST	Grignard reaction catalyst formation; arom chloride Grignard reaction catalyst formation; transition metal magnesium chloride Grignard catalyst				
IT	Grignard reagents				
	RL: SPN (Synthetic preparation); PREP (Preparation)				
	(method for synthesizing Grignard compds. using catalysts)				
IT	74-96-4, Ethyl bromide		1499-10-1, 9,10-Diphenylanthracene	7758-94-3,	
	Iron dichloride		7773-01-5, Manganese dichloride	7786-30-3, Magnesium	
	dichloride, uses		10025-73-7, Chromium trichloride	10241-05-1,	
	Molybdenum pentachloride				
	RL: CAT (Catalyst use); USES (Uses)				
	(method for synthesizing Grignard compds. using catalysts)				
IT	90-13-1, 1-Chloronaphthalene		108-90-7, Chlorobenzene, reactions		
	753-89-9, Neopentyl chloride		2009-84-9, 1-Tetrahydropyranyloxy-6-		
	chlorohexane		7439-95-4, Magnesium, reactions	9002-86-2, Polyvinyl	
	chloride		29296-32-0		
	RL: RCT (Reactant)				
	(method for synthesizing Grignard compds. using catalysts)				
IT	100-59-4P, Phenylmagnesium chloride		13132-23-5P, Neopentylmagnesium		
	chloride		69049-76-9P, 6-(Tetrahydropyran-2-yloxy)hexylmagnesium chloride		
	90767-34-3P, 1-Naphthylmagnesium chloride		104888-35-9P	201871-38-7P	
	RL: SPN (Synthetic preparation); PREP (Preparation)				
	(method for synthesizing Grignard compds. using catalysts)				

RX(1) OF 1 A ==> B



RX(1) RCT A 90-13-1
RGT C 7439-95-4 Mg
PRO B 90767-34-3
CAT 74-96-4 EtBr, 7758-94-3 FeCl₂, 7786-30-3 MgCl₂
SOL 109-99-9 THF

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	6.15	125.97
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-0.56	-5.26

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Nov 9, 2001 (20011109/UP).

=> file beilstein

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.00	125.97
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-5.26

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FILE COVERS 1779 TO 2000.

*** CAS REGISTRY NUMBERS FOR 4,356,237 SUBSTANCES AVAILABLE ***
*** FILE CONTAINS 7,688,486 SUBSTANCES ***

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* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
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* FOR PRICE INFORMATION SEE HELP COST *

> s l21/prep

6685 L21
2798213 PREP/RL

L22 465 L21/PREP
(L21 (L) PREP/RL)

=> d ti 400-410

L22 ANSWER 400 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Crystal-chemical characteristics of glauconite group minerals in the solution of problems of paleogeography, geochronology, and the evolution of sediment accumulation

L22 ANSWER 401 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Interstratified chlorite-expandable layer clay minerals in the green tuff formation

L22 ANSWER 402 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Experimental formation of interstratified minerals

L22 ANSWER 403 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Further information related to the origin of glauconite

L22 ANSWER 404 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Genesis of middle Bartonian clays of the Basin of Paris

L22 ANSWER 405 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Sequential deposition of authigenic marine minerals around New Zealand. Paleoenvironmental significance

L22 ANSWER 406 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Diagenetic glauconites in Bulgaria

L22 ANSWER 407 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Abyssal palygorskite clays of the East Atlantic and their genetic relation to alkaline volcanism (according to data of the second and 14th voyages of the scientific-research ship Glomar Challenger)

L22 ANSWER 408 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Lowering the content of alkalies in the clayey component [for cement production] by flotation

L22 ANSWER 409 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Early weathering crusts of the northern Onega bauxite-containing region and their relation to bauxite deposits

L22 ANSWER 410 OF 465 CAPLUS COPYRIGHT 2001 ACS

TI Importance of marine coprolites in mineralization processes

=> s l21 and alloy/ti

6685 L21
135822 ALLOY/TI
176228 ALLOYS/TI
310281 ALLOY/TI

((ALLOY OR ALLOYS)/TI)

L23 232 L21 AND ALLOY/TI

=> d ti 100-110

L23 ANSWER 100 OF 232 CAPLUS COPYRIGHT 2001 ACS

TI Surface pattern near grain boundaries in aluminum-1 magnesium silicide-0.4 mass% silicon alloy deformed in tension

L23 ANSWER 101 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Aluminum **alloy** resistant to heat and wear

L23 ANSWER 102 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Manufacture of heat-resistant aluminum **alloy** by continuous casting

L23 ANSWER 103 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Effect of silicon on mechanical properties of sheets of aluminum-1% magnesium silicide-0.6% copper **alloy**

L23 ANSWER 104 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Aluminum **alloy** materials for injection molds

L23 ANSWER 105 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Two-stage press molding of powdered aluminum **alloys**

L23 ANSWER 106 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Powder-forged aluminum-silicon series **alloy** parts resistant to wear and haing low thermal expansion coefficient

L23 ANSWER 107 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Quasicrystalline and related crystalline phases in a rapidly solidified 2024-2Li aluminum **alloy**

L23 ANSWER 108 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Aluminum-silicon **alloys** for sintered composites having high abrasion resistance and low thermal expansion

L23 ANSWER 109 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Wear behavior of an aluminum **alloy**-dispersed oxide particle composite

L23 ANSWER 110 OF 232 CAPLUS COPYRIGHT 2001 ACS
 TI Aging effect of the matrix-reinforcement interface on the aging responses of an aluminum 6061 **alloy** reinforced with 20 vol.% silicon carbide particulates

=> d ibib abs hitsr 108 104
 'HITSR' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

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 APPS ----- AI, PRAI
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 CAN ----- List of CA abstract numbers without answer numbers
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 DALL ----- ALL, delimited (end of each field identified)
 DMAX ----- MAX, delimited for post-processing
 FAM ----- AN, PI and PRAI in table, plus Patent Family data
 FBIB ----- AN, BIB, plus Patent FAM
 IND ----- Indexing data
 IPC ----- International Patent Classifications
 MAX ----- ALL, plus Patent FAM, RE
 PATS ----- PI, SO
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 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
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 IBIB ----- BIB, indented with text labels
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 ISTD ----- STD, indented with text labels

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 OIBIB ----- OBIB, indented with text labels

 SBIB ----- BIB, no citations
 SIBIB ----- IBIB, no citations

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 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
 containing hit terms
 HITRN ----- HIT RN and its text modification
 HITSTR ----- HIT RN, its text modification, its CA index name, and
 its structure diagram
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and
 its structure diagram
 KWIC ----- Hit term plus 20 words on either side
 OCC ----- Number of occurrence of hit term and field in which it occurs

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 ENTER DISPLAY FORMAT (BIB):end

=> d ibib abs hitstr 108 104

L23 ANSWER 108 OF 232 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1991:212332 CAPLUS
 DOCUMENT NUMBER: 114:212332
 TITLE: Aluminum-silicon **alloys** for sintered
 composites having high abrasion resistance and low
 thermal expansion
 INVENTOR(S): Otsuki, Masato; Kono, Toru; Kakehashi, Shinichiro
 PATENT ASSIGNEE(S): Mitsubishi Metal Corp., Japan; Mitsubishi Heavy
 Industries, Ltd.
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 02285043	A2	19901122	JP 1989-107043	19890426
	JP 2787703	B2	19980820		

AB The sintered or powder-forged composites are manufd. from the Al alloy
 contg. Si 35-45, Cu and Mg 0.5-5 each, Fe 0.1-1, and optionally Zr 0.1-2%,
 and include 5-20% dispersed Al₂O₃ of av. particle size 5-20 .mu.m as well
 as Si primary crystals of av. particle size 2-15 .mu.m. The composites
 are suitable for manuf. of vanes in rotary compressors.

IT 133755-62-1 133779-70-1 133779-71-2
 133779-72-3 133779-73-4 133779-74-5

133779-75-6 133779-76-7 133779-77-8
133779-78-9 133779-79-0 133779-80-3
133779-81-4 133799-90-3

RL: USES (Uses)

(sintered, with abrasion resistance and low thermal expansion)

RN 133755-62-1 CAPLUS

CN Aluminum alloy, base, Al 50, Si 36, Al₂O₃ 10, Cu 3, Mg 1, Fe 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	50	7429-90-5
Si	36	7440-21-3
Al ₂ O ₃	10	1344-28-1
Cu	3	7440-50-8
Mg	1	7439-95-4
Fe	0.5	7439-89-6

RN 133779-70-1 CAPLUS

CN Silicon alloy, base, Si 45, Al 41, Al₂O₃ 10, Cu 2.5, Mg 1, Fe 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Si	45	7440-21-3
Al	41	7429-90-5
Al ₂ O ₃	10	1344-28-1
Cu	2.5	7440-50-8
Mg	1	7439-95-4
Fe	0.5	7439-89-6

RN 133779-71-2 CAPLUS

CN Silicon alloy, base, Si 50, Al 37, Al₂O₃ 10, Mg 1, Zr 1, Cu 0.5, Fe 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Si	50	7440-21-3
Al	37	7429-90-5
Al ₂ O ₃	10	1344-28-1
Mg	1	7439-95-4
Zr	1	7440-67-7
Cu	0.5	7440-50-8
Fe	0.5	7439-89-6

RN 133779-72-3 CAPLUS

CN Aluminum alloy, base, Al 44, Si 40, Al₂O₃ 10, Cu 5, Mg 1, Fe 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	44	7429-90-5
Si	40	7440-21-3
Al ₂ O ₃	10	1344-28-1
Cu	5	7440-50-8
Mg	1	7439-95-4
Fe	0.5	7439-89-6

RN 133779-73-4 CAPLUS

CN Aluminum alloy, base, Al 46, Si 40, Al₂O₃ 10, Cu 2.5, Zr 1, Fe 0.5, Mg 0.5 (9CI)

(CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	46	7429-90-5
Si	40	7440-21-3
Al2O3	10	1344-28-1
Cu	2.5	7440-50-8
Zr	1	7440-67-7
Fe	0.5	7439-89-6
Mg	0.5	7439-95-4

RN 133779-74-5 CAPLUS

CN Aluminum alloy, base, Al 42, Si 40, Al2O3 10, Mg 5, Cu 2.5, Fe 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	42	7429-90-5
Si	40	7440-21-3
Al2O3	10	1344-28-1
Mg	5	7439-95-4
Cu	2.5	7440-50-8
Fe	0.5	7439-89-6

RN 133779-75-6 CAPLUS

CN Aluminum alloy, base, Al 45, Si 40, Al2O3 10, Cu 2.5, Mg 1, Zr 1, Fe 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	45	7429-90-5
Si	40	7440-21-3
Al2O3	10	1344-28-1
Cu	2.5	7440-50-8
Mg	1	7439-95-4
Zr	1	7440-67-7
Fe	0.1	7439-89-6

RN 133779-76-7 CAPLUS

CN Aluminum alloy, base, Al 44, Si 40, Al2O3 10, Cu 2.5, Fe 1, Mg 1, Zr 1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	44	7429-90-5
Si	40	7440-21-3
Al2O3	10	1344-28-1
Cu	2.5	7440-50-8
Fe	1	7439-89-6
Mg	1	7439-95-4
Zr	1	7440-67-7

RN 133779-77-8 CAPLUS

CN Aluminum alloy, base, Al 46, Si 40, Al2O3 10, Cu 2.5, Mg 1, Fe 0.5, Zr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		

Al	46	7429-90-5
Si	40	7440-21-3
Al2O3	10	1344-28-1
Cu	2.5	7440-50-8
Mg	1	7439-95-4
Fe	0.5	7439-89-6
Zr	0.1	7440-67-7

RN 133779-78-9 CAPLUS

CN Aluminum alloy, base, Al 50, Si 40, Al2O3 5, Cu 2.5, Mg 1, Zr 1, Fe 0.5 (9CI)
(CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	50	7429-90-5
Si	40	7440-21-3
Al2O3	5	1344-28-1
Cu	2.5	7440-50-8
Mg	1	7439-95-4
Zr	1	7440-67-7
Fe	0.5	7439-89-6

RN 133779-79-0 CAPLUS

CN Silicon alloy, base, Si 40, Al 35, Al2O3 20, Cu 2.5, Mg 1, Zr 1, Fe 0.5 (9CI)
(CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Si	40	7440-21-3
Al	35	7429-90-5
Al2O3	20	1344-28-1
Cu	2.5	7440-50-8
Mg	1	7439-95-4
Zr	1	7440-67-7
Fe	0.5	7439-89-6

RN 133779-80-3 CAPLUS

CN Aluminum alloy, base, Al 45, Si 40, Al2O3 10, Cu 2.5, Mg 1, Zr 1, Fe 0.5 (9CI)
(CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	45	7429-90-5
Si	40	7440-21-3
Al2O3	10	1344-28-1
Cu	2.5	7440-50-8
Mg	1	7439-95-4
Zr	1	7440-67-7
Fe	0.5	7439-89-6

RN 133779-81-4 CAPLUS

CN Aluminum alloy, base, Al 46, Si 40, Al2O3 10, Cu 2.5, Mg 1, Fe 0.5 (9CI) (CA
INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	46	7429-90-5
Si	40	7440-21-3
Al2O3	10	1344-28-1
Cu	2.5	7440-50-8

Mg 1 7439-95-4
Fe 0.5 7439-89-6

RN 133799-90-3 CAPLUS
CN Aluminum alloy, base, Al 44, Si 40, Al₂O₃ 10, Cu 2.5, Zr 2, Mg 1, Fe 0.5 (9CI)
(CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	44	7429-90-5
Si	40	7440-21-3
Al ₂ O ₃	10	1344-28-1
Cu	2.5	7440-50-8
Zr	2	7440-67-7
Mg	1	7439-95-4
Fe	0.5	7439-89-6

L23 ANSWER 104 OF 232 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1992:64913 CAPLUS
DOCUMENT NUMBER: 116:64913
TITLE: Aluminum **alloy** materials for injection molds
INVENTOR(S): Sano, Hideo; Okubo, Yoshimasa
PATENT ASSIGNEE(S): Sumitomo Metal Mining Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----	-----
	JP 03100137	A2	19910425	JP 1989-235821	19890913
AB	Wear-resistant molds for injection molding of plastics are manufd. from a powd. Al alloy contg. Si 5-11.5, Cu 0.5-10, ceramic particles (e.g., Al ₂ O ₃ or SiC) 0.5-5, and optionally Mg 0.3-6, and Fe, Mn, and/or Ni 0.3-6% by hot isostatic pressing, and heat treating the pressed compact to disperse ceramic and/or intermetallic compd. grains (av. diam. 0.3-10 .mu.m) in its microstructure. Thus, an injection mold from the Al alloy contg. Si 5.1, Cu 3.0, and SiC 3.0% and having the dispersed ceramic grains (av. diam. 1.8 .mu.m) after heat treatment showed Brinell hardness 78 (at 150.degree.), tensile strength 34 kg/mm ² (at 150.degree.), and Charpy impact value 2.0 kg/cm ² .				
IT	138543-29-0 138543-35-8 138543-39-2				
	RL: USES (Uses)				
	(molds, wear resistance of, dispersed ceramic and/or intermetallic compd. grains effect on, for plastic injection molding)				
RN	138543-29-0 CAPLUS				
CN	Aluminum alloy, base, Al 86, Si 8.5, Al ₂ O ₃ 2.2, Cu 2, Mg 1 (9CI) (CA INDEX NAME)				

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	86	7429-90-5
Si	8.5	7440-21-3
Al ₂ O ₃	2.2	1344-28-1
Cu	2	7440-50-8
Mg	1	7439-95-4

RN 138543-35-8 CAPLUS
CN Aluminum alloy, base, Al 83, Si 8.1, Cu 3.1, Mn 2.9, Mg 2.2, Al₂O₃ 1 (9CI) (CA

INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	83	7429-90-5
Si	8.1	7440-21-3
Cu	3.1	7440-50-8
Mn	2.9	7439-96-5
Mg	2.2	7439-95-4
Al2O3	1	1344-28-1

RN 138543-39-2 CAPLUS

CN Aluminum alloy, base, Al 80, Si 7.8, Al2O3 3.5, Mn 3.4, Cu 2.9, Mg 1.4, Ni 1
(9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
=====+=====+=====		
Al	80	7429-90-5
Si	7.8	7440-21-3
Al2O3	3.5	1344-28-1
Mn	3.4	7439-96-5
Cu	2.9	7440-50-8
Mg	1.4	7439-95-4
Ni	1	7440-02-0

=> s activated magnesium
357853 ACTIVATED
300924 MAGNESIUM
79 MAGNESIUMS
300961 MAGNESIUM
(MAGNESIUM OR MAGNESIUMS)
L1 366 ACTIVATED MAGNESIUM
(ACTIVATED (W) MAGNESIUM)

=> s l1 and mechanical
183278 MECHANICAL
12 MECHANICALS
183289 MECHANICAL
(MECHANICAL OR MECHANICALS)
409793 MECH
506272 MECHANICAL
(MECHANICAL OR MECH)
L2 9 L1 AND MECHANICAL

=> d ti 1-9

L2 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI A Mossbauer study of mechanically activated MgFe2O4

L2 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI Effect of mechanochemical activation on catalytic transformations of n-dodecane in the presence of oxygen

L2 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI New syntheses with magnesium hydride. Part 1. Hydromagnesiation of .alpha.-olefins to magnesium-dialkyls

L2 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI A model for the regulation of actin-**activated magnesium** -myosin ATPase activity: inhibition of the formation of actin-myosin complex by IMP

L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI **Mechanical** activation of magnesium turnings for the preparation of reactive Grignard reagents

L2 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI Differences between the dissolution and the decomposition kinetics of mechanically **activated magnesium** hydroxide

L2 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI Surface properties and hydriding of magnesium **mechanical** alloys

L2 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI Reaction of highly active magnesium with isoprene, myrcene, ocimene, and piperylene

L2 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2001 ACS
TI Infrared spectroscopic and electron paramagnetic resonance study of **mechanical** activation of magnesium oxide powders

=> d ibib abs hitstr 5

L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1991:42844 CAPLUS
DOCUMENT NUMBER: 114:42844
TITLE: **Mechanical** activation of magnesium turnings

AUTHOR(S): for the preparation of reactive Grignard reagents
Baker, Karen V.; Brown, John M.; Hughes, Nigel;
Skarnulis, A. Jerome; Sexton, Ann
CORPORATE SOURCE: Dyson Perrins Lab., Oxford, OX1 3QY, UK
SOURCE: J. Org. Chem. (1991), 56(2), 698-703
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:42844

AB Preactivation of magnesium by dry stirring in an inert atm. is highly beneficial for the clean synthesis of reactive allylic or benzylic organomagnesium chlorides. This procedure routinely produces 0.4 M solns. of the Grignard reagent in di-Et ether free from coupling products. The purity may be directly assayed by ¹³C NMR spectroscopy. By using spin satn. transfer techniques, the rate const. for interconversion of the enantiomers of (1-phenyl-2-methylpropyl)magnesium chloride in Et₂O at 25.degree. was shown to be <0.2 s⁻¹. Electron microscopy was used to define the surface changes occurring during the dry stirring of magnesium turnings.

=> s l1 and grinding
45346 GRINDING
160 GRINDINGS
45447 GRINDING
(GRINDING OR GRINDINGS)
L3 3 L1 AND GRINDING

=> d ti 1-3

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2001 ACS
TI Differences between the dissolution and the decomposition kinetics of mechanically **activated magnesium** hydroxide

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2001 ACS
TI **Activated magnesium** oxide catalysts

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2001 ACS
TI Titanium-**activated magnesium** borate phosphors

=> s l1 and powder
372260 POWDER
124038 POWDERS
426907 POWDER
(POWDER OR POWDERS)
162077 POWD
249 POWDS
162206 POWD
(POWD OR POWDS)
530953 POWDER
(POWDER OR POWD)

L4 31 L1 AND POWDER

=> s l4 and magnesium/ti
83068 MAGNESIUM/TI
14 MAGNESIUMS/TI
83080 MAGNESIUM/TI
(MAGNESIUM OR MAGNESIUMS)/TI

L5 23 L4 AND MAGNESIUM/TI

=> d ti 1-23

L5 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2001 ACS

TI Oxygen absorbent compositions containing supported **activated magnesium**

L5 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Production of **activated magnesium**

L5 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Manufacture of **magnesium** spinel-based refractory bricks

L5 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Synthesis of nanometric-size **magnesium** nitride by the nitriding of pre-**activated magnesium powder**

L5 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI The preparation of finely divided metal **powders** and transition metal complexes using "organically solvated" **magnesium**

L5 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI The **magnesium** hydride system for heat storage and cooling

L5 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Finely divided, highly reactive **magnesium** and its use

L5 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Evidence for heterolytic dissociation of hydrogen on the surface of thermally **activated magnesium oxide powders**

L5 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Formation of manganese(4+) centers in **magnesium oxide powder** due to nitrobenzene treatment in liquid phase

L5 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Infrared spectroscopic and electron paramagnetic resonance study of mechanical activation of **magnesium oxide powders**

L5 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Activated metals. A procedure for the preparation of **activated magnesium** and zinc

L5 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Improvements in **magnesium** aluminate gallate phosphor

L5 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Green-emitting manganese-**activated magnesium** gallate phosphors

L5 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Green-emitting manganese-**activated magnesium** aluminum gallate phosphors

L5 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Photoluminescence of europium-**activated magnesium** silicon nitride (MgSiN₂)

L5 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Activated metals. IV. Preparation and reactions of highly reactive **magnesium** metal

L5 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI **Magnesium** sulfite-supported catalysts for ethylene polymerization

L5 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2001 ACS
 TI Activated metals. I. Preparation of highly reactive **magnesium**

metal

- L5 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2001 ACS
TI ESR of O-2 species adsorbed on thermally **activated magnesium oxide powders**
- L5 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2001 ACS
TI Firing reaction and luminescence properties of titanium-**activated magnesium** fluoroborate phosphors. III. The crystal structures and luminescence properties
- L5 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2001 ACS
TI Luminescence of manganese-**activated magnesium** germanate
- L5 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2001 ACS
TI Luminescent properties of silver-**activated magnesium** borate phosphors
- L5 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2001 ACS
TI Doubly and triply **activated magnesium** pyrophosphate phosphors

=> d ibib abs hitstr 16 18

- L5 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1974:133523 CAPLUS
DOCUMENT NUMBER: 80:133523
TITLE: Activated metals. IV. Preparation and reactions of highly reactive **magnesium** metal
AUTHOR(S): Rieke, Reuben D.; Bales, Stephen E.
CORPORATE SOURCE: Dep. Chem., Univ. North Carolina, Chapel Hill, N. C., USA
SOURCE: J. Amer. Chem. Soc. (1974), 96(6), 1775-81
CODEN: JACSAT
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The redn. of Mg salts in ethereal solvents with K or Na yield Mg in the form of a fine black **powder**. This Mg metal exhibits unusual reactivity toward alkyl and aryl halides. For example, PhBr reacts with the Mg yielding PhMgBr in a few min. at - 78.degree.. The addn. of KI and other inorganic salts prior to the redn. of the Mg salt yields Mg of even greater reactivity. Reactions of this Mg with a variety of alkyl and aryl halides were studied as well as some of the physical properties of the black Mg **powders**.
- L5 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1972:564789 CAPLUS
DOCUMENT NUMBER: 77:164789
TITLE: Activated metals. I. Preparation of highly reactive **magnesium** metal
AUTHOR(S): Rieke, Reuben D.; Hudnall, Phillip M.
CORPORATE SOURCE: Dep. Chem., Univ. North Carolina, Chapel Hill, N. C., USA
SOURCE: J. Amer. Chem. Soc. (1972), 94(20), 7178-9
CODEN: JACSAT
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Redn. of Mg salts with K-THF or Na-diglyme gave reactive **powd**. Mg from which PhMgBr was prepd. (>60) at - 78.degree. in 30 min. Reaction with aryl chlorides was faster than with Mg turnings. PhMgF was prepd. from active Mg and PhF.

=> d his

(FILE 'HOME' ENTERED AT 19:24:52 ON 12 NOV 2001)

FILE 'CAPLUS' ENTERED AT 19:24:57 ON 12 NOV 2001

L1 366 S ACTIVATED MAGNESIUM
L2 9 S L1 AND MECHANICAL
L3 3 S L1 AND GRINDING
L4 31 S L1 AND POWDER
L5 23 S L4 AND MAGNESIUM/TI

=> s l1 and iodide

121761 IODIDE
15748 IODIDES
128333 IODIDE
(IODIDE OR IODIDES)

L6 4 L1 AND IODIDE

=> d ti 1-4

L6 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2001 ACS
TI Process for debrominative rearrangements

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2001 ACS
TI Activation of magnesium in the synthesis of metal carbonyls. I.
Synthesis of chromium hexacarbonyl

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2001 ACS
TI **Activated magnesium** and zinc metals

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2001 ACS
TI 9.alpha.-Halo-1,4,6-pregnatrienes

=> d ibib abs hitstr 3

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1976:494418 CAPLUS
DOCUMENT NUMBER: 85:94418
TITLE: **Activated magnesium** and zinc
metals
AUTHOR(S): Hashimoto, Harukichi
CORPORATE SOURCE: Fac. Eng., Tohoku Univ., Sendai, Japan
SOURCE: Yuki Gosei Kagaku Kyokai Shi (1976), 34(4), 246-50
CODEN: YGKKAE
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB Recent advances in the prepn. of activated Mg and Zn metals, synthesis of Grignard reagents from various org. halides using the **activated magnesiums**, and the reactions of the activated zincs and org. halides, esp. Simmons-Smith reaction with CH₂I₂ were briefly reviewed with 28 refs.

=> d it 13

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2001 ACS
IT Solution rate
(of magnesium hydroxide in aq. EDTA solns., effect of surface area on)
IT Kinetics of decomposition
(of magnesium hydroxide, effect of crystallite size on)
IT Surface area
(of magnesium hydroxide, kinetics of dissoln. in aq. EDTA soln. in

relation to)
IT Crystallites
(size of, of magnesium hydroxide, kinetics of decompn. in relation to)
IT 1309-42-8, Magnesium hydroxide
RL: RCT (Reactant)
(decompn. and dissoln. of mech. activated, kinetics of)
IT 60-00-4, EDTA, properties
RL: PRP (Properties)
(dissoln. by aq., of magnesium hydroxide, kinetics of, effect of
surface area on)

=> s l1 and iodine
98307 IODINE
170 IODINES
98379 IODINE
(IODINE OR IODINES)
L7 7 L1 AND IODINE

=> d ti 1-7

L7 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2001 ACS
TI A new generation of ylides by use of **activated magnesium**

L7 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2001 ACS
TI Mechanism of Reaction of Geminal Dihalides with Magnesium. Evidence for
the Formation of Carbenes from Radical Precursors. The Similarity in
Reactions of Geminal Dihalides with Magnesium and LiAlH₄

L7 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2001 ACS
TI Process for debrominative rearrangements

L7 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2001 ACS
TI Process for the quantitative microanalysis of hydrogen in organic
substances

L7 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2001 ACS
TI Quantitative microdetermination of hydrogen in organic substances

L7 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2001 ACS
TI Microdetermination of hydrogen in organic substances

L7 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2001 ACS
TI Use of **activated magnesium** during the quantitative
microdetermination of hydrogen in organic matter

=> d ibib abs hitstr 7

L7 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1972:121246 CAPLUS
DOCUMENT NUMBER: 76:121246
TITLE: Use of **activated magnesium** during
the quantitative microdetermination of hydrogen in
organic matter
AUTHOR(S): Fedoseev, P. N.; Baidulina, G. O.
CORPORATE SOURCE: Kiev. Tekhnol. Inst. Legk. Prom., Kiev, USSR
SOURCE: Zavod. Lab. (1971), 37(12), 1424-5
CODEN: ZVDLAU
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The org. substance was decompd. in an evacuated tube by Mg activated with
I. The catalyst was prepd. by heating 5 g Mg and 0.5 g I in a sealed tube
at 500.degree. for 2 hr. The H₂O vapors, released during decompn. of the

org. substance, react with MgI_2 on the catalyst surface to form HI. Then, HI is decomposed with Mg to form H, and the H is measured gasometrically. Saccharose and anthraquinone were analyzed with an abs. error $\pm 0.15\%$.

=> d his

(FILE 'HOME' ENTERED AT 19:24:52 ON 12 NOV 2001)

FILE 'CAPLUS' ENTERED AT 19:24:57 ON 12 NOV 2001

L1 366 S ACTIVATED MAGNESIUM
L2 9 S L1 AND MECHANICAL
L3 3 S L1 AND GRINDING
L4 31 S L1 AND POWDER
L5 23 S L4 AND MAGNESIUM/TI
L6 4 S L1 AND IODIDE
L7 7 S L1 AND IODINE

=> s grignard and magnesium chloride

36352 GRIGNARD
610 GRIGNARDS
36513 GRIGNARD
(GRIGNARD OR GRIGNARDS)
300924 MAGNESIUM
79 MAGNESIUMS
300961 MAGNESIUM
(MAGNESIUM OR MAGNESIUMS)
788771 CHLORIDE
113674 CHLORIDES
842679 CHLORIDE
(CHLORIDE OR CHLORIDES)
17703 MAGNESIUM CHLORIDE
(MAGNESIUM(W) CHLORIDE)
L8 364 GRIGNARD AND MAGNESIUM CHLORIDE

=> s grignard (l) magnesium chloride

10 GRIGNARD
300924 MAGNESIUM
79 MAGNESIUMS
300961 MAGNESIUM
(MAGNESIUM OR MAGNESIUMS)
788771 CHLORIDE
113674 CHLORIDES
842679 CHLORIDE
(CHLORIDE OR CHLORIDES)
17703 MAGNESIUM CHLORIDE
(MAGNESIUM(W) CHLORIDE)
L9 0 GRIGNARD (L) MAGNESIUM CHLORIDE

=> s grignard (l) magnesium chloride

36352 GRIGNARD
610 GRIGNARDS
36513 GRIGNARD
(GRIGNARD OR GRIGNARDS)
300924 MAGNESIUM
79 MAGNESIUMS
300961 MAGNESIUM
(MAGNESIUM OR MAGNESIUMS)
788771 CHLORIDE
113674 CHLORIDES
842679 CHLORIDE
(CHLORIDE OR CHLORIDES)
17703 MAGNESIUM CHLORIDE

(MAGNESIUM(W) CHLORIDE)

L10 138 GRIGNARD (L) MAGNESIUM CHLORIDE

=> s grigard/ti and l10

0 GRIGARD/TI

L11 0 GRIGARD/TI AND L10

=> s grignard/ti and l10

4148 GRIGNARD/TI

40 GRIGNARDS/TI

4185 GRIGNARD/TI

((GRIGNARD OR GRIGNARDS)/TI)

L12 36 GRIGNARD/TI AND L10

- L12 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI 2-Alkyl-4,6-dialkylamino-1,3,5-triazines via **Grignard** Alkylation of Cyanuric Chloride: An Aged Reaction Revisited
- L12 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Homologation of Protected Hexoses with **Grignard** Cl Reagents
- L12 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Preliminary studies on addition orientation of 2- dialkylthiomethylene-5,5-dimethyl-1,3-cyclohexadione with **Grignard** reagents
- L12 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Are bidentate ligands always acting as bidentate? The case of **Grignard** reagents
- L12 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Elongation of the pentose chain at the terminal carbon atom with **Grignard** Cl reagents. A study of the homologation reaction
- L12 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Conjugate addition of **Grignard** reagents to N-(.alpha.,.beta.-unsaturated)acylpyrazoles. Diastereoselective .beta.-alkylation using 3-phenyl-L-menthopyrazole
- L12 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Application of CuI to the addition of allylic **Grignard** reagent with carbonyl compounds
- L12 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Industrial synthesis of 3-chloro-2-methylbiphenyl by non-ligated nickel(II) chloride-catalyzed cross-coupling of aryl **Grignard** reagents with haloarenes
- L12 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Poly(.epsilon.-caprolactone) catalyzed by yttrium acetylacetonate complex and **Grignard** reagent (n-BuMgCl)
- L12 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Procedure for conversion of **Grignard** compounds with carbonyl compounds and the following hydrolysis
- L12 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Method for synthesizing **Grignard** compounds using catalysts
- L12 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Investigation of the formation reaction and structural characterization of the "platinum **Grignard** reagent" [Pt(MgCl)₂(THF)_x] by extended x-ray absorption fine structure (EXAFS) and other methods
- L12 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Synthesis of a new chiral (.beta.-aminoalkyl)phosphine ligand and its application to a catalytic asymmetric **Grignard** cross-coupling reaction
- L12 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI The roles of **Grignard** reagent in the Ziegler-Natta catalyst for propylene polymerization
- L12 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Studies on stereospecific formation of P-chiral internucleotide linkage: synthesis of all-Rp and all-Sp methylphosphonate pentanucleotide d(MMTrAPMeTPMeTPMeCPMeTAc) via **Grignard** Activated Coupling

- L12 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Study on highly active catalysts synthesized by using **Grignard** reagent for ethylene polymerization
- L12 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Inorganic **Grignard** Reagents. Preparation and Their Application for the Synthesis of Highly Active Metals, Intermetallics, and Alloys
- L12 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Synthesis of 1,2-benzisothiazole 1,1-dioxides via **Grignard** reaction of saccharin salts
- L12 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Synthesis of haloperidol ethanedithioketal HIV-1 protease inhibitors: **magnesium chloride** facilitated addition of **Grignard** reagents
- L12 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Selective preparation of borinic esters from **Grignard** reagents and selected trialkoxyboranes
- L12 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI The crystal and molecular structure of pentamethylcyclopentadienyl **Grignard** reagent: $[\text{Cp}^*\text{Mg}(\text{THF})_2\text{Cl}]_2$
- L12 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Method for the preparation of di-**Grignard** reagent - phenylenebis(**magnesium chloride**)
- L12 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Mechanical activation of magnesium turnings for the preparation of reactive **Grignard** reagents
- L12 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Effect of copper(I) iodide and **magnesium chloride** on amination of aryl **Grignards** with ketoximes
- L12 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Preparation of ketones by reaction of **Grignard** reagents with acid halides using lithium tetrahalometallate catalysts
- L12 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Influence of **magnesium chloride** on **Grignard** reagent composition in tetrahydrofuran. III
- L12 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Stereochemistry of addition of allyl **Grignard** reagents to (R)-(+)-pulegone and other α,β -ethylenic ketones
- L12 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI A novel, continuous high-yield synthesis of **Grignard** reagents
- L12 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI **Magnesium chloride**. One of the factors controlling the mechanism of the reaction between **Grignard** reagents and titanium or zirconium tetrachloride. II
- L12 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Ab initio study of the structure and vibrational frequencies of the **Grignard** reagent methylmagnesium chloride
- L12 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI New approach to the mechanism of the reaction between benzyl **Grignard** reagents and carbonyl compounds

L12 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Rearrangement of the **Grignard** reagent from 5-chloro-1-pentene-5,5-d2

L12 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Recovery of anhydrous **magnesium chloride** in the electrolytic production of organolead compounds using a **Grignard** reagent

L12 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Organolead compounds from vinylic **magnesium chloride Grignard** reagents

L12 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI Investigation of the abnormal products from the reaction of 2-thenyl and benzyl **Grignard** reagents by gas chromatography

L12 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2001 ACS
 TI A study of the entrainment method for making **Grignard** reagents

=> d 29 ibib abs hitstr

L12 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1988:15149 CAPLUS
 DOCUMENT NUMBER: 108:15149
 TITLE: **Magnesium chloride**. One of the factors controlling the mechanism of the reaction between **Grignard** reagents and titanium or zirconium tetrachloride. II

AUTHOR(S): Sobota, Piotr; Utko, Jozef; Janas, Zofia
 CORPORATE SOURCE: Inst. Chem., Univ. Wroclaw, Wroclaw, 50383, Pol.
 SOURCE: J. Organomet. Chem. (1986), 316(1-2), 19-23
 CODEN: JORCAI; ISSN: 0022-328X

DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Treatment of a Grignard reagent or $[MgR_2(THF)_2]$ ($R = CH_2Ph$) with MCl_4 ($M = Ti, Zr$) gives $[MgCl_2(THF)_2]$, which when treated with $[MCl_4(THF)_2]$ yields $[Mg(THF)_6][ZrCl_6]$ (I), $[Mg(THF)_6][ZrCl_5(THF)]_2$ (II), $[Mg(THF)_6][TiCl_5(THF)]_2$ (III), $[(THF)_4Mg(\mu-Cl)_2TiCl_4]$ (IV) and $[Mg_2(\mu-Cl)_3(THF)_6][TiCl_5(THF)]$ (V), along with MR_4 . I and II are insol. in THF, which results in a decrease of the ZrR_4 yield. III, IV and V are transient intermediates in the formation of TiR_4 .

=> d 23 ibib abs hitstr

L12 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1991:42844 CAPLUS
 DOCUMENT NUMBER: 114:42844
 TITLE: Mechanical activation of magnesium turnings for the preparation of reactive **Grignard** reagents

AUTHOR(S): Baker, Karen V.; Brown, John M.; Hughes, Nigel; Skarnulis, A. Jerome; Sexton, Ann

CORPORATE SOURCE: Dyson Perrins Lab., Oxford, OX1 3QY, UK
 SOURCE: J. Org. Chem. (1991), 56(2), 698-703
 CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal
 LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:42844

AB Preactivation of magnesium by dry stirring in an inert atm. is highly beneficial for the clean synthesis of reactive allylic or benzylic organomagnesium chlorides. This procedure routinely produces 0.4 M solns.

of the **Grignard** reagent in di-Et ether free from coupling products. The purity may be directly assayed by ^{13}C NMR spectroscopy. By using spin satn. transfer techniques, the rate const. for interconversion of the enantiomers of (1-phenyl-2-methylpropyl)**magnesium chloride** in Et₂O at 25.degree. was shown to be $<0.2\text{ s}^{-1}$. Electron microscopy was used to define the surface changes occurring during the dry stirring of magnesium turnings.

=> d 22 ibib abs hitstr

L12 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1991:207310 CAPLUS

DOCUMENT NUMBER: 114:207310

TITLE: Method for the preparation of di-**Grignard** reagent - phenylenebis(**magnesium chloride**)

AUTHOR(S): Wang, Meijun; Liao, Shijian; Xu, Yun; Yu, Daorong

CORPORATE SOURCE: Dalian Inst. Chem. Phys., Acad. Sin., Dalian, 116012, Peop. Rep. China

SOURCE: Youji Huaxue (1991), 11(1), 99-102
CODEN: YCHHDX; ISSN: 0253-2786

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

OTHER SOURCE(S): CASREACT 114:207310

AB Com. Mg was activated by adding small amt. of anthracene. The activated magnesium reacted in situ with dichlorobenzene to give phenylenebis(magnesium chloride) in high yield (70%).

=> d 7 11 ibib abs hitstr

L12 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:491691 CAPLUS

DOCUMENT NUMBER: 129:202665

TITLE: Application of CuI to the addition of allylic **Grignard** reagent with carbonyl compounds

AUTHOR(S): Li, Yan; Huang, Jinxia; Zhou, Zhongqiang; Xu, Zhanghuang; Gao, Mingzhag

CORPORATE SOURCE: Faculty Chem. Material Sci., Hubei Univ., Wuhan, 430062, Peop. Rep. China

SOURCE: Hubei Daxue Xuebao, Ziran Kexueban (1998), 20(2), 172-175

CODEN: HDXZEM; ISSN: 1000-2375

PUBLISHER: Hubei Daxue Xuebao Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The reaction of allylic Grignard reagent with carbonyl compds. may make a mixt. of alcs. comprising rearranging a nonrearranging products, and the former is main. CuI has a apparent effect on both Grignard reagent and its addnl. products. A new reactive mechanism is proposed to the addn. of allylic Grignard reagent with carbonyl compds. in the presence of CuI.

L12 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:59159 CAPLUS

DOCUMENT NUMBER: 128:128143

TITLE: Method for synthesizing **Grignard** compounds using catalysts

INVENTOR(S): Bogdanovic, Borislav; Schwickardi, Manfred

PATENT ASSIGNEE(S): Studiengesellschaft Kohle m.b.H., Germany

SOURCE: Ger. Offen., 6 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19628159	A1	19980115	DE 1996-19628159	19960712
CA 2260023	AA	19980122	CA 1997-2260023	19970703
WO 9802443	A1	19980122	WO 1997-EP3516	19970703
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 915889	A1	19990519	EP 1997-931761	19970703
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE				
JP 2000514444	T2	20001031	JP 1998-505568	19970703
US 6117372	A	20000912	US 1999-214369	19990105
PRIORITY APPLN. INFO.:			DE 1996-19628159 A	19960712
			WO 1997-EP3516 W	19970703

OTHER SOURCE(S): CASREACT 128:128143

AB The prepn. of **Grignard** reagent of arom. chloro compds. by the reaction of magnesium metal in the presence of transition metal/**magnesium chloride** complex as catalyst is described.
Thus, activation of magnesium with Et bromide in THF followed by treatment with FeCl₂/MgCl₂ in THF gave [FeMgCl.cntdot.0.5 MgCl₂] catalyst. Reaction of 1-chloronaphthalene with magnesium in THF gave 62% 1-naphthylmagnesium chloride.

=> d his

(FILE 'HOME' ENTERED AT 19:24:52 ON 12 NOV 2001)

FILE 'CAPLUS' ENTERED AT 19:24:57 ON 12 NOV 2001

L1 366 S ACTIVATED MAGNESIUM
L2 9 S L1 AND MECHANICAL
L3 3 S L1 AND GRINDING
L4 31 S L1 AND POWDER
L5 23 S L4 AND MAGNESIUM/TI
L6 4 S L1 AND IODIDE
L7 7 S L1 AND IODINE
L8 364 S GRIGNARD AND MAGNESIUM CHLORIDE
L9 0 S GRINARD (L) MAGNESIUM CHLORIDE
L10 138 S GRIGNARD (L) MAGNESIUM CHLORIDE
L11 0 S GRIGARD/TI AND L10
L12 36 S GRIGNARD/TI AND L10

=> s grignard and anthracene

36352 GRIGNARD
610 GRIGNARDS
36513 GRIGNARD
(GRIGNARD OR GRIGNARDS)
37942 ANTHRACENE
1999 ANTHRACENES
38560 ANTHRACENE
(ANTHRACENE OR ANTHRACENES)
L13 302 GRIGNARD AND ANTHRACENE

=> s l13 and magnesium anthracene

300924 MAGNESIUM
79 MAGNESIUMS
300961 MAGNESIUM
(MAGNESIUM OR MAGNESIUMS)
37942 ANTHRACENE
1999 ANTHRACENES
38560 ANTHRACENE
(ANTHRACENE OR ANTHRACENES)

59 MAGNESIUM ANTHRACENE
(MAGNESIUM(W) ANTHRACENE)

L14 24 L13 AND MAGNESIUM ANTHRACENE

=> d ti 1-24

L14 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI Applications of **magnesium anthracene** in forming **Grignard** reagents

L14 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI Direct conversion of perfluoroalkanes and perfluoroarenes to perfluoro **Grignard** reagents

L14 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI The reactivity of active magnesium from **magnesium anthracene** in the formation of di-**Grignard** reagents from aromatic dichlorides. [Erratum to document cited in CA125:58571]

L14 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI The reactivity of active magnesium from **magnesium anthracene** in the formation of di-**Grignard** reagents from aromatic dichlorides

L14 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI A facile synthesis of [14C]enadoline [(5R)-(5.alpha.,7.alpha.,8.beta.)]-N-methyl-N-[7-(1-pyrrolidinyl)-1-oxaspiro[4.5]dec-8-yl]-4-benzofuranacetamide

L14 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI Polymer supported **magnesium anthracene**: application in the synthesis of benzylic **Grignard** reagents

L14 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI Structural characterization of intermetallic Mg-Pt-complexes using X-ray absorption spectroscopy

L14 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI A Silica-Supported **Magnesium-Anthracene** Complex

L14 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI 4,5-Dihydro-4,4-dimethyl-3H-dinaphtho[2,1-c:1',2'-e]stannepin as a precursor of 2,2'-bis(lithiomethyl)-1,1'-binaphthyl

L14 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI Use of **magnesium anthracene**.cntdot. 3 THF in synthesis: generation of **Grignard** compounds and other reactions with organic halides

L14 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI **Magnesium anthracene** systems. 7. Active magnesium from catalytically prepared magnesium hydride or from **magnesium anthracene** and its uses in the synthesis

L14 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI **Magnesium anthracene** systems. 8. Magnesium adducts of substituted **anthracenes** - preparation and properties

L14 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI A new synthesis of anthraquinones using dihydrooxazoles and **grignard** reagents derived from Mg(**anthracene**) (THF)₃

L14 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2001 ACS

TI A new synthesis of anthraquinones

- L14 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI Polymer supported **magnesium(anthracene)**: effective in forming benzylic **Grignard** reagents (via electron transfer reactions)
- L14 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI Benzylic **Grignard** reagents: application of $[Mg(C_{14}H_{10})(THF)_3]$ in regioselective **Grignard** formation and carbon-oxygen cleavage in benzylic ethers
- L14 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI Organomagnesium reagents: the crystal structures of $[Mg(C_{14}H_{10})(THF)_3]$ and $[Mg(CPh_3)Br(OEt_2)_2]$
- L14 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI **Magnesium anthracene** systems and their application in synthesis and catalysis
- L14 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI Main group conjugated organic anion chemistry. 3. Application of **magnesium-anthracene** compounds in the synthesis of **Grignard** reagents
- L14 ANSWER 20 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI Preparation and applications of novel reactive polymers containing organometallic species
- L14 ANSWER 21 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI The first direct formation of a **Grignard** reagent on an insoluble polymer
- L14 ANSWER 22 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI Synthesis and structure of 1,4-dimethylantracene-9,10-diyltris(tetrahydrofuran)magnesium and μ -trichlorohexakis(tetrahydrofuran)dimagnesium anthracenide
- L14 ANSWER 23 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI **Magnesium anthracene**: an alternative to magnesium in the high yield synthesis of **Grignard** reagents
- L14 ANSWER 24 OF 24 CAPLUS COPYRIGHT 2001 ACS
 TI Magnesium and tin derivatives of fused-ring hydrocarbons and the preparation thereof

=> d ibib abs hitstr 23 18 19 10 11 12

L14 ANSWER 23 OF 24 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1985:406382 CAPLUS
 DOCUMENT NUMBER: 103:6382
 TITLE: **Magnesium anthracene**: an alternative to magnesium in the high yield synthesis of **Grignard** reagents
 AUTHOR(S): Raston, Colin L.; Salem, Geoffrey
 CORPORATE SOURCE: Dep. Phys. Inorg. Chem., Univ. West. Australia, Nedlands, 6009, Australia
 SOURCE: J. Chem. Soc., Chem. Commun. (1984), (24), 1702-3
 CODEN: JCCCAT; ISSN: 0022-4936
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Benzylic di-**Grignard** reagents were prep'd. from the appropriate benzylic chlorides in 92-96% yield and from benzylic bromides in 60 and 84% yield by slow addn. of the halide to **magnesium**

anthracene (I) in THF at 20.degree.. E.g., reaction of I with 1,8-C10H6(CH2Cl)2 gave 1,8-C10H6[CH2MgCl(THF)n]2. The **Grignard** reagent of 9-(chloromethyl)**anthracene** was prepd. analogously on stirring for 36 h with I in THF. These **Grignard** reagents are difficult to prep. by conventional methods; I reduces the undesirable coupling reactions which usually occur in these methods.

L14 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1988:454810 CAPLUS

DOCUMENT NUMBER: 109:54810

TITLE: **Magnesium anthracene** systems and their application in synthesis and catalysis

AUTHOR(S): Bogdanovic, Borislav

CORPORATE SOURCE: Max-Planck-Inst. Kohlenforsch., Muelheim an der Ruhr, 4330/1, Fed. Rep. Ger.

SOURCE: Acc. Chem. Res. (1988), 21(7), 261-7

CODEN: ACHRE4; ISSN: 0001-4842

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review contg. 64 refs. The active MgH2-Mg system, accessible via phase-transfer catalysis of magnesium by **anthracene**, can be applied for chem. synthesis, e.g., for the prepn. of silane and magnesium alkyls.

L14 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1988:437850 CAPLUS

DOCUMENT NUMBER: 109:37850

TITLE: Main group conjugated organic anion chemistry. 3. Application of **magnesium-anthracene** compounds in the synthesis of **Grignard** reagents

AUTHOR(S): Harvey, Stephen; Junk, Peter C.; Raston, Colin L.; Salem, Geoffrey

CORPORATE SOURCE: Sch. Chem., Univ. West. Australia, Nedlands, 6009, Australia

SOURCE: J. Org. Chem. (1988), 53(14), 3134-40

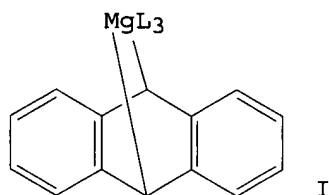
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 109:37850

GI



AB Reaction of magnesium arene compds., e.g., I (L = THF), and some silylanthracene, and/or tertiary amine analogs, with benzylic and allylic chlorides or bromides, and (Me3Si)3CCl, afford **Grignard** reagents in modest to high yield for chlorides, and negligible to high yield for the bromides, in THF, PhMe, and hexane at -10 to 20.degree.. Novel benzylic-type **Grignard** reagents prepd. in high yield include those of 9-(chloromethyl)**anthracene**, 2-(chloromethyl)pyridine and 8-(chloro- or bromomethyl)quinoline, and poly-**Grignard** reagents derived from 1,8-bis(chloromethyl)naphthalene, 2,2'-bis(chloromethyl)-1,1'-binaphthyl, and 1,3,5-tris(chloro- or

bromomethyl)benzene. **Grignard** reagent formation occurs via electron-transfer reactions. Aryl and alkyl halides yield mainly products derived from addn. of the halide across the 9,10-positions of the **anthracenes**, via nucleophilic substitution or collapse of a diradical cage.

L14 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1990:459253 CAPLUS

DOCUMENT NUMBER: 113:59253

TITLE: Use of **magnesium anthracene**
.cntdot. 3 THF in synthesis: generation of **Grignard** compounds and other reactions with organic halides

AUTHOR(S): Bogdanovic, Borislav; Janke, Nikolaus; Kinzelmann, Hans Georg

CORPORATE SOURCE: Max-Planck-Inst. Kohlenforsch., Muelheim an der Ruhr, D-4300, Fed. Rep. Ger.

SOURCE: Chem. Ber. (1990), 123(7), 1507-15

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 113:59253

AB The course of the reaction of **magnesium anthracene** .cntdot.3THF (I) with org. halides (RX) is dependent on the nature of RX. With alkyl halides in THF I reacts as a nucleophile, whereby primary as well as secondary alkyl halides produce dialkyldihydroanthracenes and reaction with tertiary alkyl halides yield primarily monoalkyl-substituted dihydroanthracenes. With bromo- and iodobenzene in THF I reacts predominantly as a radical with H atom abstraction from the solvent affording benzene and THF substituted **anthracene**. The formation of **Grignard** compds. and **anthracene**, originating from primary and secondary alkyl and aryl halides and I in toluene or ether at elevated temps., is not caused by the reaction of I but by the active magnesium (Mg*) formed by decompn. of I in these solvents. In contrast, allyl, propargyl, and benzyl halides react with I independent of the solvent under mild conditions to produce **Grignard** compds. and **anthracene**. Allyl- and the difficulty accessible allenylmagnesium chloride were prepd. in THF at -78 and 0.degree., resp., from the corresponding halides and ordinary Mg powder via catalytic amts. of I.

L14 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1990:459252 CAPLUS

DOCUMENT NUMBER: 113:59252

TITLE: **Magnesium anthracene** systems. 7.
Active magnesium from catalytically prepared magnesium hydride or from **magnesium anthracene** and its uses in the synthesis

AUTHOR(S): Bartmann, Ekkehard; Bogdanovic, Borislav; Janke, Nikolaus; Liao, Shijan; Schlichte, Klaus; Spliethoff, Bernd; Treber, Joachim; Westeppe, Uwe; Wilczok, Ursula

CORPORATE SOURCE: Max-Planck-Inst. Kohlenforsch., Muelheim an der Ruhr, D-4330, Fed. Rep. Ger.

SOURCE: Chem. Ber. (1990), 123(7), 1517-28

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 113:59252

AB Highly reactive, pyrophoric forms of magnesium with sp. surface areas of 20-109 m²/g (Mg*) can be generated by the dehydrogenation of catalytically prepd. magnesium hydride (MgH₂*) or by decompn. of **magnesium anthracene**.3THF (I). The decompn. of I, with recovery of **anthracene** and THF, may be accomplished both thermally and by ultrasound in an org. solvent (toluene, heptane) or thermally in the solid state in vacuo. Mg* obtained by the latter method exhibits only weak

reflections in the x-ray powder diagram and has, in comparison to other mentioned Mg* species, the highest reactivity toward hydrogen. Diverse **Grignard** compds. can be prepd. under mild conditions (.ltoreq.25.degree.) in THF or ether as well as in hydrocarbons by using Mg* from MgH2* or I. The cleavage of THF with formation of 1-oxa-2-magnesiacyclohexane is possible by employing M* from MgH2* or I.

L14 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1990:459251 CAPLUS

DOCUMENT NUMBER: 113:59251

TITLE: **Magnesium anthracene** systems. 8.

Magnesium adducts of substituted **anthracenes**
- preparation and properties

AUTHOR(S): Bogdanovic, Borislav; Janke, Nikolaus; Kinzelmann, Hans Georg; Seevogel, Klaus; Treber, Joachim

CORPORATE SOURCE: Max-Planck-Inst. Kohlenforsch., Muelheim an der Ruhr, D-4330/1, Fed. Rep. Ger.

SOURCE: Chem. Ber. (1990), 123(7), 1529-35

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 113:59251

AB 2-Methyl-, 1,4-dimethyl-, 9-methyl-, 9-ethyl-, 9,10-dimethyl-, and 9-phenylanthracenes (I) react with Mg in THF at room temp. to afford the corresponding substituted **magnesium anthracenes** (II). 9,10-Diphenylanthracene (III), however, reacts with Mg under the same conditions to produce the deep-blue magnesium bis(9,10-diphenylanthracenide).cntdot.6THF (IV). Upon heating to 60.degree. in THF, IV reversibly dissocs. to give magnesium 9,10-diphenylanthracene.cntdot.3THF and III, while prolonged heating at 60.degree. causes decompn. to give active Mg and III. In THF some II exhibit temp.-dependent equil. with I and Mg. Compared with Mg **anthracene**.cntdot.3THF (V), these equil. are strongly shifted toward substituted **anthracenes** and Mg, and only at 0.degree. high conversions are achieved. The Mg exchange between V and the substituted **anthracenes** in THF has been exptl. verified. II react with org. halides in the same way as V, however, in the case of allyl, propargyl, and benzyl chloride the yields of **Grignard** compds. are lower than for V; with bromobenzene, the tendency for the radical transfer reaction is stronger than for V. Magnesium 9,10-dimethylanthracene reacts with Et acetate to give the bicyclic tertiary alc. by an intramol. C-C coupling reaction.

ACCESSION NUMBER: 1990:459253 CAPLUS
 DOCUMENT NUMBER: 113:59253
 TITLE: Use of **magnesium anthracene**
 .cntdot. 3 THF in synthesis: generation of
Grignard compounds and other reactions with
 organic halides
 AUTHOR(S): Bogdanovic, Borislav; Janke, Nikolaus; Kinzelmann,
 Hans Georg
 CORPORATE SOURCE: Max-Planck-Inst. Kohlenforsch., Muelheim an der Ruhr,
 D-4300, Fed. Rep. Ger.
 SOURCE: Chem. Ber. (1990), 123(7), 1507-15
 CODEN: CHBEAM; ISSN: 0009-2940
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 113:59253
 AB The course of the reaction of **magnesium anthracene**
 .cntdot.3THF (I) with org. halides (RX) is dependent on the nature of RX.
 With alkyl halides in THF I reacts as a nucleophile, whereby primary as
 well as secondary alkyl halides produce dialkyldihydroanthracenes and
 reaction with tertiary alkyl halides yield primarily monoalkyl-substituted
 dihydroanthracenes. With bromo- and iodobenzene in THF I reacts
 predominantly as a radical with H atom abstraction from the solvent
 affording benzene and THF substituted **anthracene**. The formation
 of **Grignard** compds. and **anthracene**, originating from
 primary and secondary alkyl and aryl halides and I in toluene or ether at
 elevated temps., is not caused by the reaction of I but by the active
 magnesium (Mg*) formed by decompn. of I in these solvents. In contrast,
 allyl, propargyl, and benzyl halides react with I independent of the
 solvent under mild conditions to produce **Grignard** compds. and
anthracene. Allyl- and the difficulty accessible allenylmagnesium
 chloride were prepd. in THF at -78 and 0.degree., resp., from the
 corresponding halides and ordinary Mg powder via catalytic amts. of I.

ACCESSION NUMBER: 1990:459253 CAPLUS
DOCUMENT NUMBER: 113:59253
TITLE: Use of **magnesium anthracene**
.cntdot. 3 THF in synthesis: generation of
Grignard compounds and other reactions with
organic halides
AUTHOR(S): Bogdanovic, Borislav; Janke, Nikolaus; Kinzelmann,
Hans Georg
CORPORATE SOURCE: Max-Planck-Inst. Kohlenforsch., Muelheim an der Ruhr,
D-4300, Fed. Rep. Ger.
SOURCE: Chem. Ber. (1990), 123(7), 1507-15
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:59253

AB The course of the reaction of **magnesium anthracene**
.cntdot.3THF (I) with org. halides (RX) is dependent on the nature of RX.
With alkyl halides in THF I reacts as a nucleophile, whereby primary as
well as secondary alkyl halides produce dialkyldihydroanthracenes and
reaction with tertiary alkyl halides yield primarily monoalkyl-substituted
dihydroanthracenes. With bromo- and iodobenzene in THF I reacts
predominantly as a radical with H atom abstraction from the solvent
affording benzene and THF substituted **anthracene**. The formation
of **Grignard** compds. and **anthracene**, originating from
primary and secondary alkyl and aryl halides and I in toluene or ether at
elevated temps., is not caused by the reaction of I but by the active
magnesium (Mg*) formed by decompn. of I in these solvents. In contrast,
allyl, propargyl, and benzyl halides react with I independent of the
solvent under mild conditions to produce **Grignard** compds. and
anthracene. Allyl- and the difficulty accessible allenylmagnesium
chloride were prepd. in THF at -78 and 0.degree., resp., from the
corresponding halides and ordinary Mg powder via catalytic amts. of I.

ACCESSION NUMBER: 1972:564789 CAPLUS
DOCUMENT NUMBER: 77:164789
TITLE: Activated metals. I. Preparation of highly reactive
magnesium metal
AUTHOR(S): Rieke, Reuben D.; Hudnall, Phillip M.
CORPORATE SOURCE: Dep. Chem., Univ. North Carolina, Chapel Hill, N. C.,
USA
SOURCE: J. Amer. Chem. Soc. (1972), 94(20), 7178-9
CODEN: JACSAT
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Redn. of Mg salts with K-THF or Na-diglyme gave reactive **powd.**
Mg from which PhMgBr was prepd. (>60) at - 78.degree. in 30 min. Reaction
with aryl chlorides was faster than with Mg turnings. PhMgF was prepd.
from active Mg and PhF.

ACCESSION NUMBER: 1991:42844 CAPLUS
DOCUMENT NUMBER: 114:42844
TITLE: **Mechanical** activation of magnesium turnings
for the preparation of reactive Grignard reagents
AUTHOR(S): Baker, Karen V.; Brown, John M.; Hughes, Nigel;
Skarnulis, A. Jerome; Sexton, Ann
CORPORATE SOURCE: Dyson Perrins Lab., Oxford, OX1 3QY, UK
SOURCE: J. Org. Chem. (1991), 56(2), 698-703
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:42844

AB Preactivation of magnesium by dry stirring in an inert atm. is highly beneficial for the clean synthesis of reactive allylic or benzylic organomagnesium chlorides. This procedure routinely produces 0.4 M solns. of the Grignard reagent in di-Et ether free from coupling products. The purity may be directly assayed by ¹³C NMR spectroscopy. By using spin satn. transfer techniques, the rate const. for interconversion of the enantiomers of (1-phenyl-2-methylpropyl)magnesium chloride in Et₂O at 25.degree. was shown to be <0.2 s⁻¹. Electron microscopy was used to define the surface changes occurring during the dry stirring of magnesium turnings.

ACCESSION NUMBER: 1974:133523 CAPLUS
DOCUMENT NUMBER: 80:133523
TITLE: Activated metals. IV. Preparation and reactions of
highly reactive **magnesium** metal
AUTHOR(S): Rieke, Reuben D.; Bales, Stephen E.
CORPORATE SOURCE: Dep. Chem., Univ. North Carolina, Chapel Hill, N. C.,
USA
SOURCE: J. Amer. Chem. Soc. (1974), 96(6), 1775-81
CODEN: JACSAT
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The redn. of Mg salts in ethereal solvents with K or Na yield Mg in the form of a fine black **powder**. This Mg metal exhibits unusual reactivity toward alkyl and aryl halides. For example, PhBr reacts with the Mg yielding PhMgBr in a few min. at - 78.degree.. The addn. of KI and other inorganic salts prior to the redn. of the Mg salt yields Mg of even greater reactivity. Reactions of this Mg with a variety of alkyl and aryl halides were studied as well as some of the physical properties of the black Mg **powders**.

ACCESSION NUMBER: 1972:121246 CAPLUS
DOCUMENT NUMBER: 76:121246
TITLE: Use of **activated magnesium** during
the quantitative microdetermination of hydrogen in
organic matter
AUTHOR(S): Fedoseev, P. N.; Baidulina, G. O.
CORPORATE SOURCE: Kiev. Tekhnol. Inst. Legk. Prom., Kiev, USSR
SOURCE: Zavod. Lab. (1971), 37(12), 1424-5
CODEN: ZVDLAU
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The org. substance was decompd. in an evacuated tube by Mg activated with
I. The catalyst was prepd. by heating 5 g Mg and 0.5 g I in a sealed tube
at 500.degree. for 2 hr. The H₂O vapors, released during decompn. of the
org. substance, react with MgI₂ on the catalyst surface to form HI. Then,
HI is decompd. with Mg to form H, and the H is measured gasometrically.
Saccharose and anthraquinone were analyzed with an abs. error
.1to req. +-0.15%.